

### Environmentally-induced displacement: theoretical frameworks and current challenges

Terminski, Bogumil

Postprint / Postprint

Bibliographie / bibliography

#### Empfohlene Zitierung / Suggested Citation:

Terminski, B. (2012). *Environmentally-induced displacement: theoretical frameworks and current challenges*.

Lüttich: Center for Ethnic and Migration Studies at Université de Liège. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-336548>

#### Nutzungsbedingungen:

Dieser Text wird unter einer Deposit-Lizenz (Keine Weiterverbreitung - keine Bearbeitung) zur Verfügung gestellt. Gewährt wird ein nicht exklusives, nicht übertragbares, persönliches und beschränktes Recht auf Nutzung dieses Dokuments. Dieses Dokument ist ausschließlich für den persönlichen, nicht-kommerziellen Gebrauch bestimmt. Auf sämtlichen Kopien dieses Dokuments müssen alle Urheberrechtshinweise und sonstigen Hinweise auf gesetzlichen Schutz beibehalten werden. Sie dürfen dieses Dokument nicht in irgendeiner Weise abändern, noch dürfen Sie dieses Dokument für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

#### Terms of use:

This document is made available under Deposit Licence (No Redistribution - no modifications). We grant a non-exclusive, non-transferable, individual and limited right to using this document. This document is solely intended for your personal, non-commercial use. All of the copies of this documents must retain all copyright information and other information regarding legal protection. You are not allowed to alter this document in any way, to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public.

By using this particular document, you accept the above-stated conditions of use.

**Bogumil Terminski**

**Environmentally-Induced Displacement.  
Theoretical Frameworks and Current  
Challenges**

Geneva, 2012





## TABLE OF CONTENTS

Introduction .....	5
1. Environmentally-Induced Displacement: A New Challenge for the International Community.....	10
1.1 Case Study: Rising Sea Levels – the Situation of the Maldives Archipelago Population. .	50
2. The Most Common Causes of Environmentally-Induced Displacement.....	55
2.1 The Types of Natural Disasters.....	58
2.2 The Most Common Causes of Environmentally-Induced Displacement.....	60
3. Comments and Bibliographical Notes .....	72
4. Bibliography.....	80
4.1 Books .....	80
4.2 Chapters in Books.....	86
4.3 Articles, Book Reviews.....	97
4.4 Reports, Analysis, Working Papers, Projects.....	140
4.5 List of Acronyms.....	158

## **Introduction**

The aim of the presented paper is to demonstrate environmentally-induced displacement as an increasingly important category of population movement that represents a new set of challenges to the international community and to public international law as well<sup>1</sup>. There are three basic objectives that this work intends to achieve: 1) to argue in favour of distinguishing environmentally-induced displacement from the broader category of migratory movements and thereby making it a fully autonomous concept within the existing taxonomies, 2) to illustrate the diversity and inconsistency of environmentally displaced people (EDPs) theoretical concept, 3) to provide references to earlier theoretical achievements in this particular field of study. For these purposes, the paper tries to capture both the phenomenon of environmental displacement itself, and the problems of people affected by its consequences. Apart from theoretical considerations, it also examines which main factors force people to abandon their homes. Both long-term environmental hazards and short-lived natural disasters are investigated here, and it is shown how they entail significant implications for the dynamics of population mobility.

The social consequences of the environmental processes under scrutiny are one of the greatest challenges the international community will face in the coming years. Today, the effects of long-standing environmental changes seem obvious to many citizens of our planet. Desertification, increasing soil salinity, wasteful deforestation, and rising sea levels are just a few of the issues discussed below which influence everyday life for at least two hundred million people worldwide.

A particularly important problem is the lack of access to safe drinking water. According to WHO estimates, over 1,3 billion inhabitants of our globe currently do not have access to potable water. More than 2,2 million people in developing countries (most of them children) die each year from diseases associated with water shortage, poor hygiene and inadequate sanitation. According to the United Nations Development Report (2006) nearly half of the

---

<sup>1</sup> The author wishes to thank Marcin Zgiep and Jennifer Sheppard for their invaluable assistance and comments.

whole population in developing countries suffers at any given time from health problems caused by drought, water and sanitation deficits. The drought, disaster, and famine are, next to epidemic disease, the most common (and increasing) causes of mortality in many African countries. The rapidity of environmental changes, which currently take place in many areas of the world, precludes adaptation of millions of people to shifting conditions in their surroundings. This constitutes a key factor in the decision to migrate.

The natural disasters observed in recent years entail serious social consequences. Floods, earthquakes (and the *tsunami* waves that frequently accompany them), volcanic eruptions, and the effects of hurricanes, cyclones, and tornadoes force several million people each year to relocate. According to the Norwegian Refugee Council about 36 million people had to flee because of natural disasters in 2008, more than 16 million in 2009 and finally about 42 million in 2010<sup>2</sup>. Over the last decade, we have witnessed at least ten major disasters which had a significant long-term impact on the dynamics of long-lasting displacement. According to the estimates of international organisations, more than 1,7 million people were forced to relocate following the *tsunami* of December 2004. As a result of the raging Hurricane “Katrina” over the Gulf of Mexico in August 2005, over 300,000 people were displaced, while the disaster caused losses estimated at over 86 billion dollars. More than 1,5 million people have been displaced in the aftermath of destructive 8.8 magnitude earthquake in Chile (February 2010). Last year’s earthquake in Haiti has deprived more than 1 million residents of homes (other data suggest as much as 1,8 million). Furthermore, Japan’s March 2011 earthquake, with its magnitude over 9 and accompanying tsunami wave with its complicated repercussions, will probably have a significant impact on the dynamics of internal migration for Japanese nationals. According to the United Nations, a total of 590,000 were evacuated or displaced as a result of the quake and tsunami disaster, including more than 100,000 children. Another common cause of internal displacement, although rather underestimated in the literature, is the result of massive flooding, which occurs almost every year in the most populated Asian countries (Pakistan, China, India, Bangladesh and Vietnam). The foregoing examples represent only a small sample of the phenomenon of environmentally-induced

---

<sup>2</sup> See M. Yenotani, *Displacement due to Natural Hazard-Induced Disasters. Global Estimates for 2009 and 2010*, IDMC & NRC, Oslo, 2011; *Monitoring disaster displacement in the context of climate change. Findings of a study by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre*, OCHA, IDMC, NRC, Oslo-Geneva, June 2010.

displacement. Recalling them, however, helps us to grasp the importance of great natural disasters for significant spontaneous population exoduses. Watching television reports from areas devastated by natural disasters, we often do not realize the many subtle effects the local communities will have to deal with; demographic, social, economic, and health-related consequences of major natural disasters can be visible and palpable years after the imminent threat is gone.

In a sense, the implications of environmental hazards are affecting all of us, whether or not we are aware of it. The threats monitored in recent years call for far-reaching research on the relationship between environmental change, natural disasters, and human migration. Sudden disasters, as well as gradual environmental problems become increasingly important security issue. An intensification of research on environmentally-induced displacement may also be associated with a nexus of other migratory topics. It seems particularly relevant at this point to highlight changes in the way global migration looks in the last decades.

Over most of the last century, population movements remained primarily a political phenomenon. The partial *depoliticisation* of global mobility observed since 1989 is related to a decrease in the number of armed conflicts and thereby the number of refugees in many parts of the world. Migration research, like security studies in the late eighties, becomes less and less dependent on the dynamics of international armed conflicts. Acting as a corollary to these vital transformations is an observable *economisation* of the migration process. Economic motivations now appear the most common reason for the decision to change one's place of residence. An important complement to these processes is the *feminisation* of global mobility, and an at least partial *detritorialisation* of migration movements (the separation of a person's spatial mobility from the previously rigid and static categories of space and time). From the perspective applied here, it is time to study somewhat different phenomenon that seems to be particularly significant today: the *environmentalisation* of contemporary human migrations.

Environmentally-induced displacement currently constitute one of the dominant human conditions for forced mobility within national borders. Environmentally-induced displacement



of an international character still remains a small and limited phenomenon (*in statu nascendi*). Particularly high transnational migration potential is characterized by two phenomena: drought (and drought-induced famine) and rising sea level. Instead, this particular category of displacement appears to be taking place largely inside the confines of a given nation-state. This did not prevent the issue of environmental migrations from becoming, recently, an important locus of international cooperation. The activity of international institutions is increasingly influenced by issues which, for many years, were within an exclusive competence of state authorities. The emergence of certain global environmental processes (such as desertification, greenhouse gases emission, ozone depletion or rising sea levels caused by melting glaciers) prompts the international community to take common and coordinated actions.

An important prerequisite for such activity seems to be the modern focus on the development of international human rights protection. The situation of many communities living within national borders (various minority groups, indigenous peoples, internally displaced people, and even domestic migrants) has become a growing concern for the international community. Regarded until now as impinging on the undisputed sovereignty of the state, conservation and aid efforts (ranging from humanitarian assistance to human rights interventions) are practices which are at the same time generally accepted and widely used by many international bodies.

The aid on behalf of internally displaced persons (including environmentally displaced people) maintained by the international community commenced in the early 1990s. The first document in this regard was *Guiding Principles on Internal Displacement*, adopted in 1998. The document had no binding force; rather, it was a kind of résumé of the postulated framework of rules concerning the humanitarian aspects of the treatment of internally displaced persons. According to many observers increasing acceptance for the document throughout the world may lead in the future to turn its declarative provisions into customary international law. As Walter Kälin noted, several countries including Liberia, Uganda, Angola, Peru and Turkey, have made references to this commonly accepted soft law instrument<sup>3</sup>. Khalid Koser in the recently published article, describe the challenges facing countries in the

---

<sup>3</sup> W. Kälin, "The future of the Guiding Principles of Internal Displacement", *Forced Migration Review*-Brookings Bern (Special Ussue), p. 5-6.

transformation of the *Guiding Principles* from “soft” to “hard” law<sup>4</sup>. As professor Jane McAdam suggested, *Guiding Principles* may serve as an “interim model” for the EDPs protection “until a more comprehensive solution is found”<sup>5</sup>. The first binding document on assisting internally displaced people was the Convention of Kampala (2009), established within the African Union (AU) and already ratified by eleven AU member states. This regulation, adopted by the UN, does not distinguish any specific categories of displaced persons from the generally understood group of internally displaced persons. In fact the document mentions conflict, environment and development as the sole factors of potential displacement. However, given the diverse nature of forced mobility, it seems reasonable to differentiate at least three basic categories of forced internal displacement: “conflict-induced displacement”, “environmentally-induced displacement”, and “development-induced displacement”. Thus, there are at least three basic types of internally displaced persons.

It should be noted that not all migratory movements caused by environmental factors are of an involuntary character. It seems important to take into consideration, within the ongoing analysis, the general division of such migrations into the categories of “voluntary” and “forced”. This binary typology is quite crucial (and often underestimated in the literature). The lack of any detailed account of situational factors (as well as of the scale of the threats that affect potential migrants) can lead to absurd conclusions and generalizations – for example, an “environmentally-induced migrant” might refer just as easily to a person who has lost an entire life work in a fire or who is fleeing the spectre of famine, as it might concern a wealthy businessperson moving from the UK to the Bahamas because of the good weather there all year-round. For this reason, it is much better to separate two categories of people: environmental migrants (for whom relocation not always means the occurrence of a specific hazard or considerable deterioration of living conditions) and environmentally displaced people (undertaking forced migration due to the presence of a serious threat to their normal functioning). The detailed analysis of many of the other key issues signaled here will be described in the subsequent parts of the paper.

---

<sup>4</sup> K. Koser, „Climate change and international displacement: challenges to the normative framework” [in] É. Piguet, A. Pécoud, P. de Guchteneire (eds.), *Migration and Climate Change*, Cambridge University Press, 2011.

<sup>5</sup> “Climate-Driven Migrants Raise Thorny Legal Issues”, interview with Professor Jane McAdam, <http://ipsnews.net/news.asp?idnews=56867>.

**PART ONE:**

**ENVIRONMENTALLY-INDUCED DISPLACEMENT**

—

**A NEW CHALLENGE FOR THE INTERNATIONAL  
COMMUNITY**

Minimizing the negative effects of environmental hazards represents a source of concern and a measure of responsibility both to each citizen individually and to the international community collectively. The growing impact of environmental change upon the daily lives of the inhabitants of particular regions, countries, and even entire continents is currently a major challenge for many sectors of international cooperation. Political cooperation undertaken in this area should be supplemented by the formation of appropriate standards for public international law. To build effective institutional and regulatory forms of assistance, and to make at least a slight modification in the current perception of the environmental factors of forced migration on the basis of public international law and multilateral institutions seems of particular importance nowadays. The negative consequences of environmental changes are already, in many regions of the world, a main factor forcing millions of people to abandon

their current places of residence. Only by anticipating the imminent problems stemming from environmental disruptions can we protect ourselves against the most severe consequences in the near and distant future.

Given the nature of contemporary forced environmental migration, and the risks and problems affecting its participants, it seems better to perceive it as a fully autonomous form of human spatial mobility. Its sense is decisively different, as it remains separate from all of the currently observed migratory movements taking place within state borders. In other words, the consequences of armed conflicts (as typically understood in the case of internal displacement) are not a determinant factor in claiming that migration stems from the effects of human interference with the geographical environment (as in the case of development-induced displacement), or from various motivations of an economic nature (as in the case of migrant workers). Environmentally displaced people are affected by radically different problems and threats than the representatives of the other above-mentioned categories of migrants. That is, not only the reasons for migration, but also its nature, course, and consequences all seem to differ. The reverse may affect environmentally displaced people as well; they usually do not fall victim to armed conflict, nor, especially, does their situation constitute a substantial bargaining card in political disputes. Yet, while environmentally conditioned displacement tend to be far less spectacular than internal displacement that results from armed conflict, mass displacement, or the construction of large dams, still, in many regions of the world, their scale greatly exceeds other forms of spatial mobility within state borders. The study on relations and differences occurring between mentioned types of displacement should be based on a broad analysis of two elements: coercion and risk.

The specific location of environmental displacees as a separate category of internally displaced persons has not yet been reflected in the wording of the international documents analyzed within the scope of this work. Both the *Guiding Principles on Internal Displacement* and the recently adopted *Kampala Convention* do not capture environmentally displaced people as a distinct and specific actor in migration processes. However, many experts begin to notice the need for full autonomy of environmental refugees (environmentally displaced people) that could play a role of the normative and institutionally

advanced plane of international human rights protection. The environmental migrants will likely be subject to progressive autonomy in the overall context of the protection of internally displaced persons.

The *Guiding Principles* defines IDPs in a very broad, general and indeterminate way as “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or man-made disasters, and who have not crossed an internationally recognized State border” (see paragraph 2). The definition is strongly determined by UNHCR’s IDP framework (see following pages). However, as Angela Williams pointed out, the IDP framework may be better solution than traditional refugee umbrella determined by the Geneva Convention of 1951<sup>6</sup>. Moreover, in the content of *Guiding Principles* there are no clear references to the term ‘environmentally-induced displacement’ mentioned by UNHCR two years earlier<sup>7</sup>. The text contains no references to the terms “environment” or “climate”, however, the word “disaster” is used three times (Introduction, Principle 6 (d), Principle 7 (3)). The document refers only in a general way to all important factors of internal displacement (conflict, natural or man-made disasters and development).

The *Pact on Security, Stability and Development in the Great Lakes Region* (so-called Great Lakes Pact) adopted in December 2006 by 11 states was the first attempt to conceptualize the internal displacement in this particularly affected area. The document mentions four categories of factors shaping the regional scale of internal displacement: political conflicts, humanitarian, social and environmental catastrophes. According to the article 20 (b) State Parties undertake actions to “promote relevant policies to guarantee access to basic social services by the populations affected by conflicts and effects of natural disasters”<sup>8</sup>.

#### The Convention for the Protection and Assistance of Internally Displaced Persons in Africa

<sup>6</sup> A. Williams, “Turning the Tide: Recognizing Climate Change Refugees in International Law”, *Law & Policy*, vol. 30, no. 4, 2008, pp. 511.

<sup>7</sup> *Environmentally-Induced Population Displacements and Environmental Impacts Resulting from Mass Migrations*

<sup>8</sup> A.M. Abebe, “Legal and Institutional Dimensions of Protecting and Assisting Internally Displaced Persons in Africa”, *Journal of Refugee Studies*, vol. 22, no. 2, 2009, p. 155-176.

(commonly known as the Kampala Convention) was adopted in October 2009. The document has to be ratified by 15 out of 53 African Union countries to enter into force. As the preamble of the AU convention states: “Member States are determined to preventing and putting an end to the phenomenon of internal displacement [...] especially persistent and recurrent conflicts as well as addressing displacement caused by natural disasters, which have a devastating impact on human life, peace, stability, security, and development”. The analyses of environment-degradation-displacement relations, contained in the document are in fact much more detailed and exhaustive. The definitions of IDPs in the *Guiding Principles, Great Lakes Pact* of 2006 and Kampala Convention of 2009 to large extent converge<sup>9</sup>. As S. Ojeda noticed, by defining the term in the same manner the authors “clearly wanted to include the widest scope of application possible”<sup>10</sup>. According to the document State Parties shall: a) take measures to protect and assist IDPs due to natural or man-made disasters, including climate change, b) be liable to make reparation to IDPs for damage when a State Party refrains from protecting and assisting IDPs in the event of natural disasters, c) adopt measures to prevent and put an end to the phenomenon such as displacement caused by natural and man-made disasters<sup>11</sup>.

The problem of environmentally-induced displacement in public international law is shaped through the activities of international institutions: initially only those associated with the UN system, currently also regional ones. However, international law is rigid and international institutions are working too slowly and not always adequately to the needs and dynamics of the threats that appear in many places of the world. Let us now consider the most important international actors and activities undertaken in this area. The political and institutional aspects of the recognition and protection of so-called ‘environmental refugees’ were presented in the excellent monograph by Karen McNamara, entitled “The Politics of ‘Environmental Refugee’ Protection at the United Nations”<sup>12</sup>.

**UNEP.** The beginning of the international engagement for the recognition and protection of

<sup>9</sup> Pact on Security, Stability and Development in the Great Lakes region entered into force in 2009.

<sup>10</sup> S. Ojeda, “The Kampala Convention on Internally Displaced Persons: Some International Humanitarian Law Aspects”, *Refugee Survey Quarterly*, vol. 29, no. 3, 2010, p. 58-66.

<sup>11</sup> See article 20.

<sup>12</sup> K.E. McNamara, *The Politics of ‘Environmental Refugee’ Protection at the United Nations*, Ph.D. Dissertation, University of New South Wales, Sydney, 2006.

environmental forced migrants can be dated back to the mid-eighties. United Nations Environmental Programme (UNEP), established in 1972, was the first inter-governmental body investigating the environmental determinants of forced migration<sup>13</sup>. UNEP's activities were strongly influenced by the natural disasters of the seventies, such as Sahelian drought and famine or devastating cyclones in Bangladesh. The first attempt to conceptualize the problem came with a 44-page report entitled *Environmental Refugees*, issued by the UNEP office in Nairobi<sup>14</sup>. As Mustafa Tolba – Executive Director of UNEP noted in 1985, “these people are the millions fleeing the droughts of northern Africa, the victims of Bhopal, and the thousands made homeless by the Mexico earthquake”. In 1989 Tolba claimed that “more than 50 million people could become environmental refugees” if we would not support common actions for sustainable development<sup>15</sup>. Therefore reflections over environmental refugees developed in parallel to the study on the second category of forced displacement: development-induced displacement and resettlement. Published in the same year the report by M.M. Cerenea entitled *Putting people first: Sociological variables in rural development* (World Bank publication) is considered as the beginning of the research in this field.

By the end of the eighties the problem of environmental displacement has been associated primarily with the drought, desertification and famine. Since then most researchers began to pay attention to the more general climate factors, especially in the context of global issues. Among the events affecting the shape of environmental research during the nineties one can mention establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1988, the results of Earth Summit held in Rio de Janeiro in 1992 (adoption of the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity) and finally United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994). The problem of environmental displacement has become a concern for a growing number of institutions (UNEP, UNHCR, IPCC, IOM, UNU-EHS).

**IPCC.** The Intergovernmental Panel of Climate Change is an intergovernmental scientific

---

<sup>13</sup> UNEP – the voice for the environment in the UN system – was established as a result of the UN Conference of Human Environment in June 1972.

<sup>14</sup> E. El-Hinnawi, *Environmental Refugees*, UNEP, Nairobi, 1985.

<sup>15</sup> M. Tolba, “Our biological heritage under siege”, *Bioscience*, vol. 39, 1989, p. 725–728.

body founded in 1988 by the World Meteorological Organization and the United Nations Environment Programme. According to the IPCC publication from 1990 the direct consequence of climate change could be displacement of millions of people by shoreline erosion, coastal flooding, severe drought and agricultural degradation<sup>16</sup>. IPCC stated that “the gravest effects of climate change may be those on human migration”<sup>17</sup>. Since the mid-nineties we have observed significant changes in the IPCC’s perception of environmentally-induced migratory processes, especially in the context of redirecting this issue “in terms of *human vulnerability*”<sup>18</sup>. The most alarming predictions of the IPCC are devoted to the social consequences of ocean level rise in South Asia.

**UNHCR.** The beginnings of the UNHCR’s activities in the field of environmentally-induced displacement can be dated back to the early nineties. Pursuant to the *State of the World’s Refugees* (report prepared by the UNHCR in 1993):

Millions of people have been forced to leave their homes because the land of which they live has become uninhabitable or is no longer able to support them. In some cases the cause is a natural disaster; in others, the catastrophe is caused by humans. The disruption to the habitat may be sudden, as at Chernobyl or Mount Pinatubo or as gradual as the spread of a desert or the retreat of a forest.

In 1996 at the initiative of UNHCR, IOM and Refugee Policy Group (RPG) a three-day symposium “*Environmentally-Induced Population Displacements and Environmental Impacts*” was held in Geneva. The conference drew attention to the political aspects of environmental displacement and environmental disruptions as potential factor of the dynamics of transnational forced migrations. Publication summing up the proceedings describes five major categories of “environmentally displaced people”. According to it there are five categories of environmental problems causing forced displacement: natural disasters, man-made land contamination, the construction of large dams, land degradation processes and

---

<sup>16</sup> K. Warner, F. Laczko, “Migration, Environment and Development: New Directions for Research”. In J. Chamie, L. Dall’Oglio (eds.), *International Migration and Development, Continuing the Dialogue: Legal and Policy Perspectives*, International Organization for Migration, 2008, p. 235.

<sup>17</sup> IPCC, 1990, p. 20

<sup>18</sup> C. Raleigh, L. Jordan, “Climate Change and Migration. Emerging Patterns in the Developing World”. In R. Mearns, A. Norton, (eds.), *Social Dimension of Climate Change. Equity and Vulnerability in a Warming World*, 2007, p. 105.



climate change<sup>19</sup>. As noticed by McNamara following six-year period (1995-2001) was the time of a deep decline of the UNHCR concern towards environmental displacement. This fact could be related to the increased interest of conflict-induced displacement in connection with the adoption of the *Guiding Principles* and the number of ethnic conflicts in the African states. Since 2001 we have again observed increased interest in this particular area. The category of ‘environmental refugees’ and the real scale of the problem has become a subject of research undertaken by leading specialists in migration studies: R. Black and S. Castles.

**IOM.** Environmental determinants of forced migration were analyzed by the IOM already in the early nineties. Studies conducted by the IOM contributed to the consolidation of the term “environmental migrants”. The notion was used, inter alia, in the text of IOM-RPG analysis in 1992, but has become especially popular over the past five years<sup>20</sup>. As noted in the 1992 report entitled “Migration and Environment”:

Large numbers of people are moving as a result of environmental degradation that has increased dramatically in recent years. The number of such migrants could rise substantially as larger areas of the earth become uninhabitable as a result of climate change.<sup>21</sup>

In accordance with the IOM definition from 2007 ‘environmental migrants’ are “persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad”. The IOM proposes to distinguish three basic types of environmental migrants: 1. environmental emergency migrants, 2. environmentally motivated migrants and 3. environmentally forced migrants. According to most experts the construct of ‘environmental refugee’ is highly controversial and inappropriate in legal terms. As Oli Brown suggested the

---

<sup>19</sup> See K.E. McNamara, *The Politics of ‘Environmental Refugee’ Protection at the United Nations*, PhD dissertation, University of New South Wales, Sydney, 2006, p. 131. The classification combines environmentally-induced displacement with the consequences of construction of large dams, which is currently one of the largest category of development-induced displacement. According to the Oxford Refugee Centre report entitled *Addressing Policy Constraints and Improving Outcomes in Development-Induced Displacement and Resettlement Projects* (2001) over 26,6 % of development-induced displacement resulted from construction of large dams and irrigation projects.

<sup>20</sup> C. Bjola, M. Kornprobst, *Arguing global governance: agency, lifeworld, and shared reasoning*, Ashgate, 2011, p. 113.

<sup>21</sup> F. Laczko, Ch. Aghazarm, *Migration, Environment and Climate Change. Assessing the Evidence*, IOM, 2009, p. 13.

terms ‘environmental refugee’ or ‘climate refugee’ are generally used by activists to:

convey added urgency to the issue. In the most literal sense of the words, such people need to “seek refuge” from the impacts of climate change. Any other terminology would downplay the seriousness of these people’s situation. Moreover, the word “refugee” resonates with the general public who can sympathize with the implied sense of duress. It also carries fewer negative connotations than “migrant” which tends to imply a voluntary move towards a more attractive lifestyle<sup>22</sup>.

**UNU-EHS** (The Institute for Environment and Human Security of the United Nations University). The institute is a part of the United Nations University, established in December 2003. Studies conducted by the institute focus on the environmental dimensions of human security, especially in the context of two issues: 1. vulnerability assessment, resilience analysis, risk management and adaptation strategies, 2. internal displacement and transboundary migration due to environmental push-factors<sup>23</sup>.

**EU.** As Aurélie Sgro pointed out, neither of EU documents makes reference to forced migrations due to environmental reasons<sup>24</sup>. This problem can pose a challenge with which both the European institutions and Member States will have to deal in the coming years. Let us first mention legal problems: discussions on the common EU migration policy or environmental prerequisites to apply for asylum. Sudden disasters and long-term environmental hazards could substantially affect the dynamics of illegal migration from North and East African countries. Pursuant to the Presidency Conclusions of the Brussels European Council, 19 to 20 June 2008:

The EU is determined to provide an effective collective response to the new challenges to development posed in particular by climate change and high food prices. With regard to climate change, the EU is determined, where relevant, to help developing countries, particularly poor developing countries most vulnerable to climate change, to move towards sustainable economic growth and to adapt to climate change, in line with the agreement reached in Bali to launch negotiations aimed at securing a global agreement on climate change in Copenhagen in 2009. It will work for the effective implementation of the 2007 “Global Climate Change Alliance” and will explore ways to mobilize new financial resources to tackle climate change and combat its negative impact. In this context, the EU will work, inter alia, on the basis of

---

<sup>22</sup> O. Brown, *Migration and Climate Change*, IOM Research Paper Series, International Organization for Migration, Geneva 2008, pp. 13.

<sup>23</sup> <http://www.ehs.unu.edu/article/read/about-us>.

<sup>24</sup> A. Sgro, “Towards recognition of environmental refugees by the European Union”, *REVUE Asylon(s)*, no. 6, novembre 2008.

the Commission proposal for a global financing mechanism<sup>25</sup>.

**EACH-FOR Programme.** The Environmental Change and Forced Migration Scenarios (EACH-FOR) was a two-year long research project within the frames of the European Commission. The main goals of the project were: 1. to identify links contributing to forced migration focusing on the integration and interpretation of existing forced migration research, 2. to examine relations between environmental degradation and forced migration, 3. to produce an advanced case study research investigating these relations, 4. to analyze, forecast and synthesize how environmental degradation affects migration patterns<sup>26</sup>.

**Council of Europe (COE)** In October 2008 a group of COE Parliamentary Assembly asked the Committee of Ministers to prepare a preliminary recommendation for recognition of the problem of 'ecological refugees'<sup>27</sup>. On 31 January 2009, the Parliamentary Assembly adopted Recommendation 1862 (2009) 'Environmentally induced migration and displacement: a 21st-century challenge'<sup>28</sup>. The problem of environmentally induced displacement was also discussed during the debates on climate change, global warming and large scale arrival of irregular migrants, asylum seekers and refugees on Europe's southern shores<sup>29</sup>. According to the section 4 of the Resolution 1637 'Europe's boat people: mixed migration flows by sea into southern Europe':

„Many thousands of lives are lost as irregular migrants, refugees and asylum seekers take to sea in unseaworthy boats and undertake longer and more perilous journeys to reach Europe. They leave for a multitude of different reasons, including to escape violent conflicts, human rights abuses, persecution, abject poverty and environmental degradation. They lack legal avenues to enter Europe and often pass through countries which offer no effective international protection”<sup>30</sup>.

Legislation of two EU Member States take into account environmental disasters

<sup>25</sup> Presidency Conclusions of the Brussels European Council, 19 to 20 June 2008, see [http://www.eu-un.europa.eu/articles/en/article\\_7972\\_en.htm](http://www.eu-un.europa.eu/articles/en/article_7972_en.htm).

<sup>26</sup> Environmental Change and Forced Migration Scenarios (EACH-FOR, 2007-2009), see <http://www.each-for.eu/index.php?module=main>.

<sup>27</sup> A. Sgro, "Towards recognition of environmental refugees by the European Union", *REVUE Asylon(s)*, no. 6, Novembre 2008.

<sup>28</sup> <http://assembly.coe.int/main.asp?Link=/documents/adoptedtext/ta09/erec1862.htm>

<sup>29</sup> COE Parliamentary Assembly: Resolution 1637 (2008) Europe's boat people: mixed migration flows by sea into southern Europe.

<sup>30</sup> COE Parliamentary Assembly: Resolution 1637 (2008) Europe's boat people: mixed migration flows by sea into Southern Europe.

(catastrophes) as one of the prerequisites to apply for asylum. According to the Swedish Aliens Act of 2005 (Chapter 4, Section 3) the people who are "unable to return to the country of origin because of an environmental disaster" are described as persons in "need for protection"<sup>31</sup>. The Aliens Act of Finland, adopted in 2004, refers to the problem in two different sections (section 88a- *Humanitarian Protection* and section 109 – *Temporary Protection*). In accordance with the section 88, environmental disaster may be a prerequisite to apply for asylum in the absence of the possibility of returning to his/her country of origin or former residence<sup>32</sup>.

### **Towards recognition and protection of forced environmental migrants in the public international law. Refugee or IDPs umbrella?**

#### *Theoretical considerations: classifying environmentally induced forced displacement*

Given the nature of the displacement processes observed recently, it seems reasonable to distinguish three types of forced internal displacement. These include:

**1. Conflict-induced displacement** (usually resulting from the dynamics of internal armed conflicts and long-term discrimination). We can call these internally displaced people (IDPs) either “conflict-induced displaced persons” or “conflict-induced internally displaced people”. People displaced due to political conflicts are also called “persons displaced by conflicts”, “politically displaced persons”, “internal refugees”, “political refugees”, “internally displaced persons” (only in a political context). The internal displacement is also rooted in ethnic, religious, national and racial discrimination.

**2. Environmentally-induced displacement** (following a permanent, interim, or sudden change in environmental conditions relevant for human functioning). We can call these displaced people: “environmentally-induced displaced people”, “environmental refugees”, “environmental displacees”, “environmentally-induced displaced persons” (EDPs), “environmentally-displaced populations”,

<sup>31</sup> See: Aliens Act (2005:716) available at: <http://www.regeringen.se/content/1/c6/06/61/22/bfb61014.pdf>

<sup>32</sup> See: Aliens Act ((301/2004, amendments up to 1152/2010 included) available at: <http://www.finlex.fi/en/laki/kaannokset/2004/en20040301.pdf>

“environmentally-induced migrants”, or “environmental forced migrants”. To people who may be at risk specifically as a result of climate change we can use the terms: “climate refugees”, “climate change refugees”, “climate migrants”, “climate affected migrants”, “climate induced migrants”, “climigrants”, “eco-migrants” and “eco-refugees”. People forced to migrate as a result of natural disasters (hurricanes, tornadoes, tsunamis, earthquakes, and volcanic eruptions) are more often being referred to as “disaster displaced persons”. (The term “migrants” is commonly used to refer to all categories of participants in migrant flows, the term “refugee” is a legal construct applied to the people benefiting from the provisions of the Geneva Convention of 1951). Environmental-forced migrants can therefore be analyzed on the basis of three conceptual categories: as forced internal migrants, specific category of ‘refugees’ and finally as displaced people.

**3. Development-Induced Displacement** (undertaken after the implementation of large investments, such as dams, manufactured lakes, irrigation projects, the construction of roads and railways, the development of raw materials, urban expansion, agriculture, deforestation and even the creation of national parks). The fundamental motivation behind a change of residence is not – in this case – a specific environmental factor (for example, soil desertification or drought), but instead stems from an industrialization process of sustainable human interference with the environment. At least ten million people a year will be forced to relocate following the implementation of large investments (especially the construction of dams and reservoirs, or network communications links). While DIDR occurs all over the world, two countries – China and India – are particularly responsible for a large part of such resettlements. According to cautious estimates, over the past two decades at least 220 million people were resettled as a result of large investments. Nowadays development-induced displacement and resettlement (DIDR) constitutes the largest category of internal displacement. People affected by these processes are called “development-induced displaced persons” (DIDPs), “development displaced persons”, “persons displaced by development projects”, or “development-induced migrants”. Sometimes it seems hard to distinguish between environmentally displaced persons and development-induced displaced persons. We encounter these problems especially when a major factor in change of

residence refers to the environmental consequences of major water investments (for example, degradation of the ecosystem around a dam), rather than to the direct order to move.

Eventually there appear to be three completely separable forms of internal displacement. Environmentally-induced displacement does not constitute a coherent category of research. In order to perform well-founded investigation into the nature and degree of stability of environmental processes that affect human beings, we shall divide environmentally-caused population movements into four subcategories: three categories of forced displacement and one category of voluntary migration.

**1. Displacement that results from irreversible or long-term changes in the surrounding ecosystem.**

These include persistent desertification, land degradation, coastal erosion, increasing salinity of soils and rising sea levels.

The most common causes of these migration categories are: a) land degradation, inappropriate agricultural practices, b) the desertification of soil, c) consequences of deforestation, c) the increasing level of salinity of water bodies and soil, d) sustained increase in temperature in certain territories (which prevents the maintenance of agriculture), e) rising sea levels, f) coastal erosion, g) the irreversible consequences of major natural disasters like volcanic eruptions or wildfires, h) the irreversible effects of environmental contamination by radioactive materials, and i) the consequences of land degradation by other chemicals (e.g. oil spills).

**2. Displacement that results from cyclical environmental factors that hinder normal human function in a particular territory.**

These include, for example, periodic droughts and the drying up of rivers on the African continent, or various popular Asian migrations in the monsoon seasons.

The most common causes of this migration category consist of: a) periodic droughts and related threat of famine (for example, some African rivers dry out in the summer), b) migration in the Asian monsoon season, c) although

less frequent, periodic migrations caused by the threat of forest fire (e.g. in Australia), and d) the historically cyclical migrations of people from flood areas (e.g. in Ancient Egypt).

**3. Migration caused by natural disasters or man-made catastrophes.** This may involve both short-term evacuations from an area of imminent danger as well as long-term or permanent changes of residence (for example, as a result of devastation of homes by a flood, tsunami, earthquake, volcanic eruption, forest fire, storm, chemical contamination, industrial accidents, etc.).

The most common causes of these migrations include: short-term, chronic, or permanent movements in connection with a) flood, b) wildfire or bushfire, c) volcanic eruption, d) earthquake, e) tsunami, f) hurricanes, tornadoes, cyclones, storms etc., g) other atmospheric phenomena, h) the effects of long-term rainfall (for example, landslides and mudslides), i) (hypothetically) the disastrous consequences of heat or great frost, j) the consequences of man-made disasters: industrial accidents and chemical contamination.

**4. Environmentally conditioned migration of a totally voluntary nature.** This can be short-term (tourism), cyclical (for example, spending the summer season in the temperate climate and the winters in the tropical climate), or permanent. For instance, such decisions are made by persons wishing to move to another place for a particular time of year.

In conclusion, we can speak of three types of environmental displacement and one voluntary category of internal human mobility conditioned by environmental factors.

Research on the environmental context of human mobility was undertaken for the first time in the field of geography and history. As Ernst Georg Ravenstein (1835-1913), father of the contemporary migration studies stated, “bad or oppressive laws, heavy taxation, and unattractive climate, all have produced and are still producing the currents of migration”. One can mention the theory of environmental determinism, particularly popular in the

early 20th century. Of particular importance here is the work of two American geographers: Ellen Churchill Semple (1863-1934) and Ellsworth Huntington (1876-1947). Natural disasters, most notably the Dust Bowl in the thirties as well as more general environmental reflections (see *Road to Survival*, a 1949 book by W. Vogt) inspired researchers to look into the problems regarding the relationship between environment and migration.

The earliest extensive scientific studies on the issue of environment-related displacement can be found in the mid-eighties of the twentieth century. Nevertheless, methodological and conceptual consensus has never been reached. Main problems concern the operations of defining and naming. Many terms elaborated in the past describing people forced to leave their homes for environmental reasons remain in use until today. I will discuss below the terms most frequently used to circumscribe a person who changes his or her place of residence due to environmental causes.

1. **Environmental migrants.** The term “environmental migrant” appeared for the first time in 1992 in the report of the IOM and RPG. The definition adopted by the organization in 2008 characterizes them as: “persons or groups of persons who, for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to have to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their territory or abroad”.<sup>33</sup> Nowadays the IOM proposes to use other notions (e.g. ‘forced climate migrants’) as an alternative to “environmental refugees”. The concept of ‘environmental refugee’ is highly contested by the IOM because of its excessively maximalistic form, since it demands too much in legal categories. In fact the terms like “environmental/climate refugee” suggest monocausality of displacement factors, which, for many reasons, is not the whole truth.

The UNU-EHS proposed a new terminology, based on a combination of the

---

<sup>33</sup> See “Environmentally induced migration and displacement: a 21<sup>st</sup> century challenge”, Council of Europe, 23<sup>rd</sup> December 2008.



two categories: triggers and responses. According to Renaud et al. (2008) we can distinguish three basic categories of environmental migrants:

- *Environmental emergency migrants* are people displaced due to sudden events, especially disasters. They flee to save their lives due to the worst kinds of threats, mostly disasters. The most common causes of such displacements are: floods, hurricanes, tsunami waves, earthquakes, volcanic eruptions, etc.
- *Environmentally forced migrants* are people who have to abandon their homes in connection with worsening environmental conditions. They are forced to leave because of gradual and often irreversible degradation of environment, with only limited opportunity to return to their homes. The causes of such displacements include: droughts, coastal deterioration, deforestation, etc.
- *Environmentally motivated migrants* are people who decide to migrate from deteriorating area anticipating the negative environmental changes in the future. They may leave to pre-empt the possible environmental worsening of the situation in their residence and its surroundings. For example, it occurs when someone resolves to depart due to environmentally-connected decline in agricultural production yielding economic difficulties<sup>34</sup>.

The term “environmental migrant” still remains in common use in scientific literature and public discourse. As Andrew Morton, Philippe Boncour, and Frank Laczko pointed out, we can define environmental migrants as: „those individuals, communities, and societies who choose, or are forced, to migrate as a result of damaging environmental and climatic factors. This broad and diverse group ranges from people forced to flee disasters demand for resources in excess of available supply, can lead to chronic poverty and hunger, high levels of communicable diseases, conflict and adaptation, or to coping strategies that include temporary or permanent migration”<sup>35</sup>.

---

<sup>34</sup> F. Renaud et al., “Deciphering the Importance of Environmental Factors in Human Migration. In: Environment”, *Forced Migration and Social Vulnerability Conference*, UNU-EHS. Bonn, Germany, 2008.

<sup>35</sup> A. Morton, P. Boncour, F. Laczko, „Human security policy challenges”, *Forced Migration Review*, vol. 31, pp. 5-7.

According to Graeme Hugo, environmental migrants are “people who migrate because of the disruption (by natural or anthropogenic force) of environment at the place of their usual habitat”.<sup>36</sup> This definition seems to indicate one of the best theoretical approaches toward environmental migration.

The term “environmental migrants” (“forced environmental migrants”) is also used by Katarina Sramkova, the author of recently published and extremely valuable book *Involuntary Environmental Migrants. Unprotected*<sup>37</sup>. In her opinion, the on-going environmental processes require far-reaching reconceptualization of the notion of refugees. She suggests to supplement the international convention on the status of refugees with additional protocols, taking account of the problems of environmental forced migrants.

In an article “Ecomigration: Linkages Between Environmental Change and Migration”<sup>38</sup>, its author W.B. Wood argues for use of the term ‘ecomigrants’. Examining the problem solely in terms of refugeeism narrows the perspective down and consequently reduces the number of possibilities in creating classifications, conducting analyses and lastly doing research. There is also too much prevalence of the legal and policy-oriented perspectives. In his opinion, the term ‘ecomigrants’ is not limited to those forced to migrate due to the direct impact of environmental hazards and the risks caused by it, but should also be appropriate and applicable to the communities, which may be at risk of potential environmental disruptions. According to the author the term emphasizes the extended interaction between ecological and economic context of population mobility and its far-reaching social implications: leaving the place of current residence (the prefix ‘eco-’ derives from the ancient Greek

---

<sup>36</sup> G. Hugo, “Environmental Concerns of International Migration”, *International Migration Review*, vol. 30, no. 1, Spring 1996, p.105-131, see also K. Kavanova, “Qualitative Research Methods in Environmental Migration Research in the Example of Belarusian Environmental Migrants”, <http://www.ehs.unu.edu/file/get/3811>.

<sup>37</sup> K. Sramkova, *Involuntary Environmental Migrants. Unprotected*, Lambert Academic Publishing, 2010.

<sup>38</sup> W. B. Wood, “Ecomigration: Linkages Between Environmental Change and Migration”. In A.R. Zolberg, P.M. Benda (eds.), *Global Migrants, Global Refugees: Problems and Solutions*, Berghahn Books, 2001, p. 43-45.

word “oikos”, which means ‘household’, ‘home’, or ‘family’).

However several authors apply the term “environmental migrants” only to persons changing their place of residence in a voluntary manner. For Olivia Dun, François Gemenne and Robert Stojanov environmental migrants “are people who chose to move voluntarily from their usual place of residence primarily due to environmental concerns or reasons.”<sup>39</sup>

**2. Climate migrants (climate refugees, climate exiles).** Due to climatic reasons, rooted in many contemporary migratory movements, the term “climate refugees” is relatively frequently used. For obvious reasons, this category is definitely narrower than the term “environmental migrants”.

The Global Governance Project defines climate refugees as “people who have to leave their habitats, immediately or in the near future, because of sudden or gradual alterations in their natural environment related to at least one of three impacts of climate change: sea-level rise, extreme weather events, and drought and water scarcity”.<sup>40</sup> According to the definition from the *Global Encyclopaedia of Political Geography*, a climate refugee is “a person dislocated by climatic change induced environmental disasters. Such disasters are evidence of human-influenced ecological change and disruption to Earth’s climatic system, primarily through the emissions of greenhouse gases”.<sup>41</sup> The term “climate refugees” does not seem the same as the term “environmental refugees”, most frequently used in scientific publications. (The term “climate refugees” is, in my opinion, a more detailed category than “environmental refugees”).

Oli Brown, the author of 2008 IOM publication entitled *Migration and*

---

<sup>39</sup> O. Dun, F. Gemenne, R. Stojanov, *Environmentally displaced persons: Working Definitions for the EACH-FOR project*, paper presented at the International Conference on Migration and Development in Ostrava, Czech Republic on 5 September 2007.

<sup>40</sup> “Global Governance Project”: <http://www.glogov.org/>.

<sup>41</sup> M.A. Chaudhary, G. Chaudhary (eds.), *Global Encyclopaedia of Political Geography*, 2009, p. 43.

*Climate Change* uses the term “forced climate migrants”. Though he does not seek to define in a exhaustive way this phenomenon. In his view, the problem requires a far broader normative conceptualization, especially in the context of international refugee protection. Equally important are the practical measures at the national level. State authorities should seek to minimize the problems associated with deteriorating environmental conditions: poverty, health risks, marginalization and lack of access to basic resources.

The impact of climate change on the dynamics of migration processes is a controversial issue. According to many experts there is currently no clear evidence of climate processes such as sustained increase in sea level. Research on global warming leads to more and more doubts and antagonisms. Studies of this kind are most often deeply politicized. Furthermore what is worth mentioning is that the climate change processes are only a part of a broader environmental context, rather than vice versa. These caveats were clearly illustrated by Kanti Bimal Paul, author of recently published book *Environmental Hazards and Disasters: Contexts, Perspectives and Management*. In his view, “climate migrant is a subcategory of environmental migrant and sea level rise migrant is a subcategory of climate migrant”<sup>42</sup>.

As Frank Laczko and Christine Aghazarm noted:

‘Natural disasters’ can be seen as a subcategory of ‘environmental disasters’, which have been classified by theorists in different ways, according to their cause and temporal nature. The causes of displacement are difficult to disentangle, given the political, economic, demographic and environmental factors at play<sup>43</sup>.

As Elizabeth Ferris added, climate conditioned migrations or displacements are usually permanent in nature. People forced to flee as a result of rising sea levels will not have a chance to get back home. In extreme cases, climate exile

---

<sup>42</sup> B. Kanti Paul, *Environmental Hazards and Disasters. Contexts, Perspectives and Management*, Wiley-Blackwell, 2011, s. 25.

<sup>43</sup> F. Laczko, Ch. Aghazarm (eds.), *Migration, Environment and Climate Change, Assessing the Evidence*, IOM, Geneva, 2009, p. 250.

is – like development-induced displacement and resettlement – the most severe and irreversible category of forced migrations<sup>44</sup>.

**3. Environmental refugees.** The term was first coined in 1976 by Lester Brown, the American environmentalist and founder of Worldwatch Institute. Before 1989 it was used in the context of at least a dozen articles, however, those studies were not detailed and lacked the definition of the problem. In 1984 Sir Edmund Hillary wrote a book entitled *Ecology 2000: the changing face of earth* where, among others, he used this term. According to the author, “in Ethiopia, a new failure of the rains during the past for years has created a new class of environmental refugees” [...] “the Ethiopian Government is moving tens of thousands of its environmental refugees from their overused, eroded highlands to the relatively underpopulated – because malaria-infected – lowland plains”<sup>45</sup>. In the same year Lloyd Timberlake, an American expert on sustainable development, applied the term “environmental refugees” in the report *Environmental wars & environmental refugees: the political background to the Cartagena Convention* where he drew attention to the negative impact of ignoring the environmental context of contemporary forced migrations<sup>46</sup>. By 1985 it appeared, *inter alia*, in the documents of the European Commission, OECD, ECOSOC, UNEP, the U.S. Department of State and the ministries of health and internal affairs of Sudan and Ethiopia. However the extended concept of “environmental refugees” appears first in the eighties of the 20th century through the works of Essam El-Hinnawi (1985), Jodi Jacobson (1988), and Sir Crispin Tickell (1988).<sup>47</sup> Equally important (and even more influential) are the works published in the nineties

---

<sup>44</sup> B. Termiński, *Przesiedlenia inwestycyjne. Nowa kategoria migracji przymusowych*, Wydawnictwo Łośgraf, 2012; E.G. Ferris, *The politics of protection. The limits of humanitarian action*, The Brookings Institution, 2011, p. 27.

<sup>45</sup> E. Hillary, *Ecology 2000: The changing face of earth*, Joseph, 1984, p. 214.

<sup>46</sup> L. Timberlake, *Environmental wars and environmental refugees: the political background to the Cartagena Convention*, Earthscan, 1983.

<sup>47</sup> L. Westra, *Environmental Justice and the Rights of Ecological Refugees*, 2009, p. 169; T. Doyle, M. Risely, *Crucible for survival. Environmental security and justice in the Indian Ocean Region*, 2008, p. 276; F. Biermann, P. Pattberg, F. Zelli, *Global Climate Governance Beyond 2012. Architecture, Agency and Adaptation*, 2010, p. 256;

by Arthur Westing (1992), Norman Myers (1993), and Astri Suhrke (1991, 1993)<sup>48</sup>. Since the early nineties, the international institutions rarely use the term 'environmental refugees'. International agencies have ceased to use it for a more neutral terms. However the term is often used by the authors of many scientific papers. Let us now examine how the phenomenon of environmental refugeeism is described by the authors of the most influential recently discipline of research.

Essam El Hinnawi defined environmental refugees as “those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural or triggered by people) that jeopardised their existence and/or seriously affected the quality of their life”.<sup>49</sup> The author goes on to define “environmental disruption” as “any physical, chemical, and/or biological changes in the ecosystem (or resource base) that render it, temporarily or permanently, unsuitable to support human life”. As El-Hinnawi points out, we can distinguish three main sub-categories of environmental refugees: 1) people temporarily displaced as a result of specific threats and environmental stress (such as cyclones or earthquakes), 2) people permanently displaced from their homelands due to permanent/irreversible changes to their habitat, such as the construction of dams, lakes, and the consequences of radioactive contamination, and 3) people who are permanently displaced because their surrounding habitat can no longer satisfy their basic needs.<sup>50</sup> El-Hinnawi claims therefore, wrongly in my opinion, that development-induced displacement is a form of environmental refugee movement. El Hinnawi's work does not distinguish between the two basic categories of disasters, namely, natural versus man-made. That is, it does

---

<sup>48</sup> A.H. Westing, “Environmental refugees: a growing category of displaced persons”, *Environmental Conservation*, vol, 19, 1992, p. 201–207; N. Myers, “Environmental refugees in a globally warmed world”, *Bioscience*, no 43, 1993 p. 752-61; A. Suhrke, A. Visantin, “The Environmental Refugee: A New Approach, Ecodecision”. In D. Keane (ed.), *The Environmental Causes and Consequences of Migration: A Search for the Meaning of 'Environmental Refugees'*, 1991; A. Suhrke, *Pressure points: environmental degradation, migration and conflict. In Workshop on Environmental Change, Population Displacement, and Acute Conflict*, Insitute for Research on Public Policy, Ottawa.

<sup>49</sup> E. El-Hinnawi, *Environmental Refugees*, United Nations Environment Programme, Nairobi, 1985.

<sup>50</sup> See *ibid*.

not distinguish more specific sub-categories of environmental refugees. Diane Bates opposes his stance by saying that “El-Hinnawi did not provide generic criteria distinguishing environmental refugees from other types of migrants [...]. His definition makes no distinction between refugees who flee volcanic eruptions and those who gradually leave their homes as soil quality declines”.

<sup>51</sup>

El Hinnawi’s definition became an object of criticism, among other things, in an article published in 1991 by Astri Suhrke and Annamaria Visentin.<sup>52</sup> They point to the need for a separation between involuntary environmental refugees and voluntary environmental migrants. According this divide environmental refugees are “people or social groups displaced as a result of sudden, drastic environmental change that cannot be reversed”. Conversely, an environmental migrant is a person who “makes a voluntary, rational decision to leave a region as the situation gradually worsens there”.<sup>53</sup> Distinguishing these two categories seems to be a step in the right direction. It should be mentioned that some forms of environmental migration are not consequences of deterioration of environmental living conditions. (For example, the wealthy British businessperson is not carried to the island of Madera as a result of worsening environmental conditions in London, but due to his or her own climate-related whim.)

Ben Gorlick, Senior Policy Advisor to the UN, defines environmental refugees as a “people who are displaced from or who feel obliged to leave their usual place of residence, because their lives, livelihoods, and welfare have been placed at serious risk as a result of adverse environmental, ecological, or climatic processes and events”<sup>54</sup>.

---

<sup>51</sup> D.C. Bates, “Environmental Refugees? Classifying Human Migrations Caused by Environmental Change”, *Population and Environment*, vol. 23, no. 5, May 2002, p. 466.

<sup>52</sup> A. Suhrke, A. Visentin, “The environmental refugee: A new approach”, *Ecodecision*, 1991.

<sup>53</sup> See *ibid.*

<sup>54</sup> K. van Wormer, F.H. Beshorn, *Human Behavior and the Social Environment. Groups, Communities and Organizations*, Oxford University Press, 2011, p. 279.

In 1988, Jodi Jacobson from Worldwatch Institute defined environmental refugees in a very general way as “people fleeing from environmental decline”.<sup>55</sup> She distinguished three main categories of environmental refugees, among them: 1) people temporarily displaced in connection with local environmental disasters (such as earthquakes and avalanches); 2) people resolving to migrate due to progressive degradation of the environment, that poses a threat to their health and normal functioning in a given territory; and 3) people deciding to resettle because of the desertification, soil change, or other irreversible changes in the habitat. Moreover Jodi Jacobson analyzes the potential impact of climate change and raising sea levels to possible migration processes. As pointed out by Karen McNamara, her work can be considered as the first attempt to introduce environmental refugees to a more general directory of the climate change research<sup>56</sup>. According to Jacobson, rising sea level may be – next to the anthropogenically conditioned land degradation – the most important cause of environmental refugeeism. The publication clearly emphasizes the anthropogenic origin of climate changes. In majority of cases the responsibility may be ascribed to the highly developed economies (e.g. growing energy consumption). Obviously Jacobson’s intention is to underline strong antagonisms between the perpetrators and the victims of such negative environmental processes.

One of the most fundamental reports on environmental refugees was published in 1992. Its authors, Jan Borgen (Norwegian Refugee Council), Nina Birkeland, Preston Scott and Jon Trolldalen argued that the term “environmental refugees”:

First, it should refer to persons who are coerced or forced to leave their homes for environmental reasons that threaten their lives. Secondly, it should be limited to persons who have crossed an international border: that is,

---

<sup>55</sup> J.L. Jacobson, *Environmental Refugees: A Yardstick of Habitability*, Worldwatch Institute, 1998; J.L. Jacobson, “Environmental Refugees: A Yardstick of Habitability”, *Bulletin of Science Technology Society*, vol. 8, no. 3, June 1988, p. 257-258.

<sup>56</sup> K.E. McNamara, *The Politics of ‘Environmental Refugee’ Protection at the United Nations*, Ph.D. Dissertation, University of New South Wales, Sydney, 2006, p. 103



persons who are outside their country of nationality or origin.

Legal barriers and the limited nature of transnational environmentally induced displacement make these assumptions difficult, if not impossible, to implement<sup>57</sup>. The proposed definition for at least a decade ahead of the current debate on environmental prerequisites to apply for asylum or the consequences of deterritorialization of archipelagic states. This publication enumerates three fundamental causes of environmental refugeeism: 1. natural disasters and climate changes, 2. degradation of land and resources, 3. infrastructure development<sup>58</sup>. In particular, much attention was drawn to human-induced environmental degradation (caused, among other things, by inappropriate agricultural practices or a long-term chemical contamination).

The work *Desperate Departures. The Flight of Environmental Refugees*, issued by the Population Institute in 1992, does not contain any direct and comprehensive definition of environmental refugees. However, its authors list seven general environmental problems underlying the present forced migrations: 1. geophysical processes, 2. biological hazards (for example, caused by bacteria, viruses, pesticides, etc.), 3. land degradation, 4. climate change, 5. chemical contamination, 6. consequences of large infrastructural projects (dams, railways, irrigation projects, etc.), 7. war of environmental backing. The real value of this publication lies in highlighting the role of spontaneous and short-term factors of forced migration. Combining environmentally induced displacement and development-induced displacement, which is typical for many NGOs, is, in my opinion, completely incorrect, because it leads to overstate the total number of displaced people.

---

<sup>57</sup> M.E. Kahn, an author of recently published book titled *Climatopolis: How our cities will thrive in the hotter future* (Basic Books, 2010) presents this problem in a similar manner. He defines environmental refugees as “people migrating due to changes in environmental conditions in their home country”. In particular, he devotes much attention to the climate determinants of migration from rural to urban areas (a phenomenon that characterizes many African countries, such as Ghana).

<sup>58</sup> Troidallen (et al.) as well as Jacobson perceives environmental refugees in terms of victims of long-term environmental disruptions.

According to Norman Myers, environmental refugees are “people who can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation, and other environmental problems, together with associated problems of population pressures and profound poverty”.<sup>59</sup> As Myers ascertained, an environmental refugee is in weaker position due to its semi-permanent or permanent status, because it has only a small chance for a happy return home.

Interesting (and not entirely unfounded) perceptions and definitions have been worked out in numerous analyses, reports, and working papers issued by certain NGOs.<sup>60</sup> Members of the Strasbourg Diplomacy (a European students’ association) suggest distinguishing two main categories of environmentally related migrants: “environmentally motivated migrants” and “environmental refugees”. According to their proposal:

- *Environmentally motivated migrants* are persons or groups of people who move from their usual place of residence due to foreseeable, long-term forced circumstances caused by environmental factors, either temporarily or permanently, within their own country;
- *Environmental refugees* are persons or groups of people who are suddenly evicted from their country, because their lives, livelihoods, and welfare have been placed at serious risk as a result of adverse environmental processes and events either temporarily or permanently.

The last definition, however, seems extremely difficult to defend. It is impossible to reduce our contemporary understanding of refugees only to people who cross state borders (or, for example, benefit from UNHCR assistance). Over the past fifty years, we have observed significant evolution of the “refugee concept”, perhaps best evidenced by the development of the

---

<sup>59</sup> N. Myers, “Environmental Refugees: A Growing Phenomenon of the 21<sup>st</sup> century”, *Philosophical Transactions of The Royal Society B*, vol. 357, no. 1420, p. 609-613.

<sup>60</sup> Strasbourg Diplomacy Working Paper, *Human Rights Council (Topic: Climate change and migration)*, <http://strasdiplomacy.web.officelive.com/Documents/Resolution%202.3.pdf>.

concept of internally displaced persons in the nineties of the last century. Refugeeism is now a significantly different conceptual category than it was 30 or even 20 years ago.

As pointed out by Diane Bates, the methodological and theoretical foundations of the concept of environmental refugees continue to raise many doubts. In an article published in 2009, “Environmental refugees? Classifying Human Migrations Caused by Environmental Change”, she wrote, “so many people can be classified under the umbrella of ‘environmental refugee’ that critics question the usefulness of the concept”<sup>61</sup>. Instead Bates suggests a different approach, using a working definition under which environmental refugees are people who migrate from their usual residence due to ambient changes in their non-human environment.

According to Somerville, “environmental refugees are people obliged to leave their traditional or established homelands because of environmental problems (deforestation, desertification, floods, drought, sea-level rise, nuclear-plant accidents), on a permanent or semi-permanent basis, with little or no hope of ever returning”.<sup>62</sup>

As Woehlcke put it, “environmental refugees are persons who leave their traditional milieu because their life has been considerably restricted by natural and/or anthropogenic ecological damage and by the ecological strain of over population”.<sup>63</sup> Other authors define environmental refugees as “persons displaced owing to environmental causes, notably land losses and degradation and natural disasters” or as persons “fleeing a natural or human-caused environmental disaster”.<sup>64</sup>

---

<sup>61</sup> D.C. Bates, “Environmental Refugees? Classifying Human Migrations Caused by Environmental Change”, *Population and Environment*, vol. 23, no. 5, May 2002, p. 466.

<sup>62</sup> R.C.J. Somerville, *The Forgiving Air*, University of California Press, 1995.

<sup>63</sup> M. Woehlcke, “Environmental Refugees”, *Aussenpolitik*, vol. 43, no. 3, 1992, p. 287.

<sup>64</sup> J. Karpilo, “Environmental Refugees. Displaced from their homes by disaster and environmental circumstances”, <http://www.geography.about.com/>.

Some authors linked the phenomenon of environmental refugeeism with the problem of development-induced displacement, which is not entirely accurate. Both forms of forced internal migration are in fact fully separate from each other. As Granzeier noticed, environmental refugees are people “forced to flee their traditional homeland because of a serious change or ‘environmental disruption’ in the nature of their environment due to natural disasters exacerbated by human activities, the construction of dams or irrigation systems, toxic contamination, rampant deforestation and resultant erosion”.<sup>65</sup> According to a recently released book entitled *Understanding Social Problems*, environmental refugees are defined as “individuals who have migrated because they can no longer secure a livelihood as a result of deforestation, desertification, soil erosion, and other environmental problems”.

66

**4. Environmentally Displaced Persons.** In recent years, the concept of environmentally displaced persons (EDPs) is being used more and more frequently. The United Nations High Commissioner for Refugees (UNHCR), the Office of the High Commissioner for Human Rights (OHCHR), the International Organization for Migration (IOM), and the Refugee Policy Group (RPG) have all opted to use the term “environmentally displaced persons”<sup>67</sup>. At the 1996 International Symposium on “Environmentally-Induced Population Displacements and Environmental Impacts Resulting from Mass Migration”, “environmentally displaced persons” were described as “persons who are displaced within their own country of habitual residence or who have crossed an international border and for whom environmental degradation, deterioration, or destruction is a major cause of their

---

<sup>65</sup> M. Scully Granzeier, “Linking Environment, Culture, and Security”. In S. Kamieniecki, G.A. Gonzalez, R.O. Vos (ed.), *Flashpoints in environmental policymaking: controversies in achieving sustainability*, SUNY Press, Albany NY, p. 311-335.

<sup>66</sup> L.A. Mooney, D. Knox, C. Schacht, *Understanding Social Problems*, Cengage Learning, 2010.

<sup>67</sup> B. See, D. Baptista, “Preparing’ for ‘Environmental’ ‘Refugees’”, <http://www.munfw.org/images/61%20UNHCR.pdf>.

displacement, although not necessarily the sole one”.<sup>68</sup>

Jeff Crisp, head of the UNHCR Policy Development and Evaluation Services proposes to introduce two main categories of environmentally displaced people: 1) people displaced due to processes (for example, climate change, global warming, desertification, soil degradation, rising sea level, etc.) and 2) people displaced due to events (hurricanes, floods, droughts, volcanic eruptions, earthquakes, tornadoes, etc.). The classification proposed by Jeff Crisp therefore combines elements already known from previous studies by Norman Myers (security risk) and Jodi Jacobson (separating local events from more general global processes). Based on the simple premise this classification seems to be, in my view, one of the most successful and extremely useful theoretical approaches of the problem<sup>69</sup>.

Nicole de Moor and Professor An Cliquet from the University of Ghent distinguish three different causes of environmentally induced displacement: 1. environmental degradation due to climate change and biodiversity loss, 2. sudden environmental disasters (including natural and technological disasters), 3. intentional destruction of the environment<sup>70</sup>.

Dana Zartner Falstrom (2001) defines environmentally displaced person as “one who leaves his or her home and seeks refuge elsewhere for reasons relating to the environment”<sup>71</sup>. Unlike professor Jessica Cooper, the author believes that it is difficult to reconcile two completely separate regimes: international refugee law based on the Geneva Convention of 1951 and the concept of IDPs<sup>72</sup>. In her opinion the only way to prevent potential future scale

---

<sup>68</sup> D. Keane, “Environmental Causes and Consequences of Migration: A Search for the Meaning of “Environmental Refugees”, *Georgetown International Environmental Law Review*, 2004.

<sup>69</sup> Cited by J. Crisp, “Environmental Refugees: a UNHCR perspective”, Lausanne, 12<sup>th</sup> June 2006.

<sup>70</sup> N.de Moor, A. Cliquet „Environmental Displacement: A New Challenge for European Migration Policy”, <https://biblio.ugent.be/>, p. 3.

<sup>71</sup> D.Z. Falstrom, „Stemming the flow of environmental displacement: Creating a convention to protect persons and preserve the environment”, *Colorado Journal of Environmental Law and Policy*, vol. 15, 2001, p. 1-20.

<sup>72</sup> J.B. Cooper, „Environmental Refugees: Meeting the Requirements of the Refugee Definition”, *New York University Environmental Law Journal*, vol. 6, 1998.

of the problem is to adopt a convention providing protection to people displaced by changing environmental conditions. As Falstrom noted:

Only through a new set of provisions, outlined in a separate \*30 document and based on the recognized international legal protections and obligations outlined in existing international human rights law and international environmental law, can the international community truly hope to address this rapidly growing problem and stem the tide of environmentally displaced persons<sup>73</sup>.

An interesting definition of “environmentally displaced persons” has also been proposed by the French Centre International de Droit Comparé de l’Environnement (C.I.D.C.E.), in a text regarding Draft Convention on the Status of Environmentally-Displaced Persons. Pursuant to this document, environmentally displaced persons are “individuals, families, and populations confronted with a sudden or gradual environmental disaster that inexorably impacts their living conditions, resulting in their forced displacement, at the outset or throughout, from their habitual residence”.<sup>74</sup> In a working paper prepared in 2007, Gemenne, Dun, and Stojanov suggested to distinguish among three subcategories of Environmentally Displaced Persons: 1) Environmental migrants, 2) Environmental displaces, and 3) Development displacees.<sup>75</sup>

Luc Hens, an author of several reports on Ghana’s environmental problems claims that “environmentally displaced person is someone who decides to leave his/her homeplace permanently or temporarily, mainly for reasons of environmental degradation. A refugee is somebody who, during this displacement, crosses national borders”<sup>76</sup>. Ghana is a fascinating example of coexistence of environmentally induced migrants (coming from the North to the coast and the capital of Accra), development-induced displacees (due to

---

<sup>73</sup>D.Z. Falstrom, „Stemming the flow of environmental displacement: Creating a convention to protect persons and preserve the environment”, *Colorado Journal of Environmental Law and Policy*, vol. 15, 2001, p. 1-20.

<sup>74</sup> See: <http://www.cidce.org/>.

<sup>75</sup> O. Dun, F. Gemenne, R. Stojanov, Environmentally Displaced Persons. Working Definitions For The Each-For Project, 11 October 2007, p. 1.

<sup>76</sup> L. Hens, *Institutional, Legal and Economic Instruments in Ghana’s Environmental Policy*, Research Paper, Vrije Universiteit Brussels, 1999.

the construction of Akosombo dam) and, albeit on a limited scale, politically motivated refugees (including international ones). Just as in Sudan or Nigeria one can observe there all major categories of internal displacement, as well as other fascinating migratory processes (e.g. independent children migrations).

In an article entitled “Environmentally Displaced People” the same author notes:

Persons who are displaced within their country of habitual residence or who have crossed an international border and for whom environmental degradation, deterioration or destruction is a major cause of their displacement, although not necessarily the sole one, belong to environmentally displaced people. These persons are refugees in the real sense of the word, but their situation does not coincide with the legal definition of “refugee”.<sup>77</sup>

The concept relatively quickly penetrated well the academic discourse. The term “environmentally displaced people” was used, among others, by Boano, Zetter and Morris (2006), and to some extent also in released a few years ago an excellent monograph by Alexander Betts (*Forced Migrations and the Global Politics*). As pointed out by Laura Westra term “environmentally displaced people” should not be treated as a synonym for ecological or environmental refugees<sup>78</sup>.

The theoretical reflections presented above have led me to create my own working definition of the terms “environmental migrants” and “environmentally displaced people”. I particularly want to draw attention to the diversity of contemporary environmental migration, as well as the scale of the threats that affect it. It is even more important to point out diversity in both the duration and the scale of the coercive factors which force migrants to flee their homes. According to above-mentioned assumptions, it seems reasonable

---

<sup>77</sup> L. Hens, “Environmentally Displaced People”. In Encyclopedia of Life Support Systems (ELOSS), <http://www.eolss.net/Sample-Chapters/C16/E1-48-51.pdf>.

<sup>78</sup> A. Betts, *Forced Migrations and Global Politics*, Wiley & Blackwell, 2009, p. 1; C. Boano, R. Zetter, T. Morris, *Environmentally displaced people: understanding the linkages between environmental change, livelihoods and forced migration*, Refugee Studies Centre, 2008; L. Westra, *Environmental Justice and the Rights of Ecological Refugees*, 2009.

to detach the general category of environmental *migrants* from the narrower (and thereby subordinate to it) category of environmentally *displaced people*:

- α) **Environmental migrants** are persons making a short-lived, cyclical, or long-term change of residence, of a voluntary or forced character, due to specific environmental factors. Environmentally displaced people form a specific type of environmental migrant;
- β) **Environmentally displaced people** are persons compelled to spontaneous, short-lived, cyclical, or long-term changes of residence due to sudden or gradually emerging changes in the environment essential to their living conditions, which may be of either a short-term or an irreversible character.

We can describe the general ecosystemic properties relevant to human functioning in a particular area as “environmental conditions” or “environmental factors”.

Thus every environmental refugee is an environmental migrant, but not every environmental migrant is an environmental refugee.

The following table lists the most commonly used terms for the people forced to abandon their homes due to environmental reasons:

Major analytical categories	Most common terms
Refugees	“environmental refugees”; “climate refugees”; “climate change refugees”; “eco-refugees”; “environmental-refugee-to-be”; “ecological refugees” (L. Brown, 1976; L. Westra 2009)
Migrants	“environmental migrants”; “environmentally induced migrants”; “climate migrants”; “climigrants”; “ecomigrants”; “environmental forced migrants”; “environmentally forced migrant”; “environmental emergency migrant”; “environmentally motivated migrant”; “climate forced migrants”; “environment influenced mobility”; “forced climate migrants”; “climate-driven migrants”;
Displaced people	“environmentally displaced people”; “environmental displacees”; “environmentally induced displaced persons”; “ecologically displaced



	persons”; “climate change induced displaced people”; “climate exiles”; “internally resettled victims”;
People displaced due to disasters	“disaster displaced persons”; “disaster caused migrants”; “disaster refugees”; “disaster induced displaced people”;
People displaced due to environmental processes	“nuclear refugees”; “sea level refugees”; “flood-induced displaced people”; “tsunami generated displacement”; “climate evacuee”; In the context of development induced displacement: “dam induced displacement”, “mining induced displacement & resettlement”, etc.

The evidence for the lack of methodological consensus in the research of environmentally forced migration contributes also to the diversity of terms used to identify the participants in this process. Currently, the most commonly used term seems to be “environmental refugees”. It seems to illustrate pretty well the coercive nature of the change of residence as well as the complexity and diversity of the underlying factors. Furthermore it seems important to draw a demarcation line between fully forced environmental exile and various forms of voluntary migration like that caused by preference for a particular type of climate. The terms “climate migrants” (climigrants) or “eco-refugees” (eco-migrants) often found in the literature have, in my view, a definitely wider meaning relative to the terms “environmental migrants” and “environmental refugees”. They refer to narrower environmental conditions that are behind climatic and ecological population mobility.

Some studies also stress the term “environmentally displaced populations” (or environmentally displaced persons: EDPs).<sup>79</sup> Such determination is a clear analogy to the term “internally displaced persons” (IDPs), widely adopted recently.<sup>80</sup> The application of the above-mentioned terms (“climate refugees”

<sup>79</sup> K.K. Moberg, “Extending refugee definitions to cover environmentally displaced persons displaces necessary protection”, *Iowa Law Review*, March 2009; J. Scott, “Protection of Environmentally Displaced Populations through Strengthening Existing Environmental Human Rights Law”, [http://works.bepress.com/jessica\\_scott/1](http://works.bepress.com/jessica_scott/1); S.S. Juss, *International migration and global justice*, 2006, p. 172.

<sup>80</sup> Therefore, the intention of the authors of the term “environmentally displaced persons” could be to show common features, linking the said group of people to the category of IDPs. Both of these groups – far more numerous than refugees, understood in the “conventional” sense – are not currently covered by the binding state of the conventional solutions for the protection of refugees.

and “environmental refugees”), however, may raise some controversy. At a semantic level, they equate ecological groups of migrants with a refugee group to which the standards of the 1951 Geneva Convention are applied. Environmental refugees do not constitute a separate or institutionally developed legal category but rather a notional construct of a political and social sort. Even the rather synthetic characteristic of the most commonly used notions, presented above, shows how a great terminological confusion characterises the description of the group of migrants currently discussed in this section of the paper.

The conceptual grid used in the description of categories of environmental migrants should, in my opinion, take into account three main factors. Firstly, it seems relevant to distinguish between categories of migrants based on the environmental nature of the factors (forced, coerced, or voluntary) causing a change of residence. In case of the imminent threat of the individual, it seems reasonable to speak of displacement on environmental grounds. If, conversely, these factors only make it difficult but not directly threaten the functioning of the individual in the area, it seems more appropriate to speak about migration than displacement (however, the occurrence of long-term, gradually increasing environmental threats in a given area, such as the rising sea level around archipelagic states remains a contentious issue at this point.). Secondly, environmentally caused displacement or migration should represent movement of a *relatively permanent nature*. It is difficult to label an evacuation lasting a few hours to several days caused by, for example, local flooding in terms of an environmental “exile”.<sup>81</sup> Thirdly, it also seems important to highlight the relationship between the systems currently operating in the literature. Climatic and disaster-induced displacements are, in my view, subcategories of the broader, more fundamental category of environmentally induced displacement. Additionally, it is crucial to stress the importance of

---

<sup>81</sup> T. Hammar, *International migration, immobility and development. Multidisciplinary perspectives*, 1997, p. 34; J.D. Unruh, M.S. Krol, N. Kilot, *Environmental change and its implications for population migration*, 2004, p. 238.

disaster-induced displacement as a special (but not fully autonomous) category of environmentally-induced displacement. In the next part of this section I will try to characterise the main reasons for the environmental changes which pose risks to human societies (representing environmentally-induced displacement catalysts.)

One increasingly frequent form of forced migration in recent years has been displacement associated with the creation of national parks, natural reserves, or other types of ecologically protected areas. In my view, this category of population displacement is not a form of environmentally-induced displacement. It seems rather to represent one form of development-induced displacement. Displacement associated with the creation of national parks is a direct consequence of the industrialisation process. The resulting need to protect natural heritage and biodiversity is therefore a primary reason of the creation of national parks.

Forced resettlement directed by state authorities following the construction of dams (such as China's Three Gorges Dam, Sardar Sarovar in India, Merowe Dam in Sudan or Akosombo Dam in Ghana) is one of the most frequent forms of development-induced displacement. Forced displacement caused by the environmental side-effects of major investments definitely represent a different category. (These types of displacements normally take place after the completion of major investments). When the construction of a dam produces negative effects on the functioning of coastal residents (for instance, by decreasing the amount of fish in surrounding bodies of water), the residents are often forced to change their place of abode. These people, therefore, are not development-induced displaced people but rather environmentally-induced displaced people. (Their main reason for a change of residence was not the direct result of dam construction, but was instead the worsening environmental living conditions in their habitat). Once again, there should be differentiation

between two categories of resettlement: 1) resettlement (displacement) caused by human activity, and 2) resettlement (displacement) caused by natural factors.

The amount of environmentally induced displaced people is increasing each year. In 1995, their number was estimated at more than 25 million people.<sup>82</sup> At the moment, we can talk about 10 million environmental refugees in Africa and several additional millions in other parts of the world. According to estimates by the UN University for Environment and Human Security, the number of people permanently displaced by environmental changes at the end of 2010 would be more than 50 million. According to researchers at Columbia University, over 200 million people will be forced to migrate for environmental reasons before 2050. Only with sustained effort will we be able to counteract the predicted magnitude of the risk in subsequent years<sup>83</sup>.

Throughout history, environmental (not political) motivations have been a key catalyst for human migration. Progressive environmental change was one of the main causes of the spread of *Homo erectus* and *Homo sapiens sapiens* out of the African continent (the so-called theory of the African exodus). Changes occurring in the environment also contributed to the fall of great powers. Desertification of soils and deteriorating living conditions in Central Asia were the main cause of the Huns European invasion and resulting displacement of the Germanic tribes, leading eventually to the collapse of the Western Roman Empire. The volcanic eruption of Santorini around 1600 BCE played a large role in the cultural formation of the Mediterranean. According to some hypotheses, it has led to the collapse of two great material cultures in this area: Cycladic and Minoan. In the absence of written sources from that era and with the difficulties involved in the analysis of archaeological material, it

---

<sup>82</sup> Myers N., "Environmental Refugees. A Growing Phenomenon of the 21<sup>st</sup> Century", <http://www.envirosecurity.org/>.

<sup>83</sup> J. Vaughn, *Environmental Politics: Domestic and Global Dimensions*, Cengage Learning, 2011, p. 331; see also F. Renaud, J.J Bogardi, O. Dun, K. Warner, *Control, Adapt or Flee. How to Face Environmental Migration*, 2007, p. 15; see F. Gemenne, "Why the numbers don't add up: A review of estimates and predictions of people displaced by environmental changes", *Global Environmental Change*, 2011.

is difficult for us to estimate the scale of population movements caused by that disaster. According to current research, the volcanic eruption of Thera was the most powerful eruption in earth's history. It brought about the flooding of at least a few islands. Reverberation from this volcanic explosion circled the globe four times and the volcanic ash cloud may have remained over the Mediterranean Sea for years. The macro-social effects of such an explosion (such as agricultural repercussions) and the related migratory movements are potentially beyond measure. The drought (starting in ~2200 BC) may have also initiated the collapse of the Egyptian Old Kingdom as well as the Akkadian Empire in Mesopotamia. So-called "Sea Peoples Invasion" to Cyprus, Hatti and the Levant was *de facto* environmentally induced forced migration.

One of the first well-established references to disaster induced displacement was made by Pliny the Younger, who described the consequences of the outbreak of Vesuvius in 23 and 24 August 79 CE. Three Roman cities (Pompeii, Stabiae, and Herculaneum) were destroyed. Tens of thousands of people died or were forced to flee. A letter to Tacitus by Pliny the Younger, preserved to this day, contains a vivid description of the emotions associated with natural disasters, characteristic even now, for the majority of people displaced due to natural disasters or evacuees. As Pliny wrote "*You could hear women lamenting, children crying, men shouting. Some were calling for parents, others for children or spouses; they could only recognize them by their voices [...] Nor were we without people who magnified real dangers with fictitious horrors.*"<sup>84</sup> In modern times, major natural disasters are also a factor in mass displacement. As a result of the earthquake in China's Shaanxi Province in 1556, more than 830,000 people were killed and at least several million were forced to relocate. Floods and earthquakes in the last centuries were a major cause for migration within China (in the twentieth century alone, three major earthquakes in that country – in 1920, 1927, and 1976 – claimed

---

<sup>84</sup> Plinius Tacito Suo S. An Tacitus (Lib. VI, epist. XX.-r. 79).

nearly a million victims)<sup>85</sup>.

Reasons for changes in the environment have recently become an area of intense research. To date, however, it is difficult for the scientific community to achieve consensus in this regard. The answer to the question of to what extent environmental changes are the result of human activity is now a cornerstone of the dispute. According to currently dominant views, human activity is a major contributor to the imbalance of global habitats. The anthropogenic causes of environmental changes include, inter alia, the impact of greenhouse gases and particulate matter (so-called atmospheric aerosols). These are the result of aggressive industrialisation in many areas of the world. An equally important contributor to global environmental change is the destruction of tropical forests, which absorb carbon dioxide and produce oxygen. Among the favourable factors of climate change – those of a natural character – one can enumerate, among others: changes in the magnetic poles of the earth (a process which normally takes several thousand years); the dependence of land upon astronomical cycles (the so-called theory of Milutin Milanković cycles); changes in the solar constant (consisting of fluctuations in the solar power reaching the ground); and the impact of volcanic eruptions and seismic activity records.<sup>86</sup> We should also remember that the effects of climate change can look very different in different parts of the globe. (For instance, “global warming” may actually be associated with a *decrease* in temperature in some places, such as in Europe.)

One serious threat behind current environmentally caused displacement includes a general rise in sea levels, caused by glacial melting. According to some researchers, ocean levels will increase over the next hundred years by more than two meters<sup>87</sup>. Rising water levels currently not represent a

---

<sup>85</sup> H. Mallee, F.N. Pieke, *Internal and international migration. Chinese perspectives*, 1999, p. 187; K. Smith, *Environmental hazards. Assessing risk and reducing disaster*, 2009, p. 20.

<sup>86</sup> E. Claussen, V.A. Cochran, D.P. Davis, *Climate change. Sciences, strategies & solutions*, 2001, p. 215; cf. B.A. Pittock, *Climate change. The science, impacts and solutions*, 2009, p. 7-54.

<sup>87</sup> J. D. Milliman, J. M. Broadus, F. Gable, „Environmental and Economic Implications of Rising Sea Level and Subsiding Deltas: The Nile and Bengal Examples”, *Ambio*, vol. 18, no. 6, 1989, p. 340-345.

significant source of environmentally induced displacement, but in subsequent years may firmly gain strength. Areas below 10 meters above sea level constitute only two percent of the globe; however, as much as 10 percent of the world's population resides there. The first incidence of mass migration caused by a rise in sea level was the flooding in 1995 of Bangladesh's Bhole Island. As a result, half of the island is no longer fit to live on, and more than half a million people lost shelters.<sup>88</sup> A similar problem can reach the inhabitants of Carteret Islands, an atoll belonging to Papua New Guinea<sup>89</sup>. Rising sea level may permanently displace at least 10 thousand residents of the archipelago. Can we prevent this kind of problems? In the case of Nigeria alone, a one-metre rise in ocean level could force more than 3.7 million people to migrate. (In the case of a two-metre rise, that figure could increase to 10 million.) Equally important related problems include the issues of changing climate zones, ocean currents, and monsoon activity, as well as the occurrence of tornadoes. Significant changes in the summer monsoon period affect the economic situation of many Asian countries.

Another cause of environmentally induced displacement is when soil becomes barren or desertified. In keeping with estimates made by international organisations, the process of desertification annually affects more than 6 million hectares in more than sixty countries around the world. According to UNEP estimations one quarter of the earth's land and more than 300 million people is threatened by desertification<sup>90</sup>. A dwindling supply of drinking water presents a particularly high risk for the functioning of communities.<sup>91</sup> In some

---

<sup>88</sup> E. Wax, "In Flood-Prone Bangladesh, a Future That Floats", *The Washington Post*, 27/09/2007; M. Seear, *An introduction to International Health*, 2007, p. 263.

<sup>89</sup> J. Connell, "The Carteret Islands: precedents of the Greenhouse effect", *Geography*, vol. 75, no. 2 (April 1990), pp. 152-154.

<sup>90</sup> Source: The United Nations Convention to Combat Desertification: A New Response to an Age-Old Problem, see: <http://www.un.org/ecosocdev/geninfo/sustdev/desert.htm>

<sup>91</sup> The right to water can be considered one of the most basic economic rights of every human being, cf M.A. Salman, *The human right to water. Legal and policy dimensions*, 2004, pp. 7-28; M. Barlow, *Blue covenant. The global water crisis and the coming battle for the right to water*, 2009, p. 15-46; A. Cassar, N. Nemes, *Water as a Human Right*, 2004, p. 15-27; cf. for analogical discussions regarding the human right to food, P. Alston, K. Tomasevski, *The Right to Food*, 1987, p. 7-12; Ch. Christensen, *The right to food. How to guarantee*, 1978, p. 1-15; *The right to food. In theory and practice*, 1998, Food and Agriculture Organization of the United Nations, p. 1-48.

areas of Africa (e.g. Sudan, Chad, and the Western Sahara), the distance of some settlements from their nearest water source amounts to tens of kilometres. Lack of water or its pollution is the cause of death of more than 40 thousand people a day. More than one billion inhabitants of our planet have no access to clean water sources and more than two and a half billion live in very poor sanitary conditions. Lack of water, coupled with the problem of hunger, is now one of the most common causes of internal migration in developing countries. Quite often, the situation results from ever-deteriorating environmental factors. As reported by the Food and Agriculture Organization (FAO), over 962 million people are currently starving. Every five seconds, a child dies of hunger; in the span of just one day, this adds up to more than 20,000 victims of starvation.<sup>92</sup>

Another major problem in recent years is the advancing salinity of freshwater basins.<sup>93</sup> An additional reason for the growing scale of environmentally-induced displacement is the wasteful deforestation conducted in many countries, sometimes triggered by large development projects. This promotes the process of soil desertification (like that of China) or the loss of traditional farming in particular areas (especially in Latin America). A further key motivation for a change of residence constitutes an increased risk of flooding in such areas. The most vulnerable flood risk areas around the world include China's Grand Canal and the main river basins in Asia: Yangtze River, Yellow River, and Mekong<sup>94</sup>. Still other common sources of environmentally induced displacement include earthquakes (along with the associated tsunami waves) and volcanic eruptions; sometimes the mere threat of these natural disasters presents cause enough for displacement. In the next portion of this section, the author will attempt to characterise the main stimuli for environmentally

---

<sup>92</sup> A. Gonzalez-Pelaez, *Human rights and world trade. Hunger in international society*, 2006, p. 15; J. Hancock, *Environmental human rights. Power, ethics and law*, 2003, p. 149.

<sup>93</sup> H. Bekle, Q. Beresford, J. Mulock, H. Phillips, *The salinity crisis. Landscape, communities and politics*, p. 270; T. Hayward, *Constitutional environmental rights*, 2004, p. 206.

<sup>94</sup> M. Allaby, R. Garratt, *Floods*, Infobase Publishing, 2003, p. 142; V. Smil, *China's past, China's future: energy, food, environment*, Routledge, 2004, p. 161.



induced displacement in various regions of the world.

Africa remains the continent with by far one of the largest number of environmental forced migrants worldwide. The main causes of environmental displacement are land degradation and desertification, much less the natural disasters. Millions of potential displacees now live in the African Sahel region, where they escape from the northern areas as a result of drought and lack of access to drinking water. Many economically motivated migrations are *de facto* determined by worsening environmental conditions (North-South Migrations in Ghana). Currently, nearly 10 million people in the Sahel region are at risk of hunger.<sup>95</sup> Tremendous problems surrounding water shortages and hunger are visible in the current territories of the Sudan, Ethiopia, Somalia, and Kenya. In Nigeria, the rising levels of the Atlantic Ocean and the flooding of coastal islands present a major predicament. It is estimated that an increase of only 20 centimetres in the water level could deprive nearly eight hundred thousand inhabitants of their homes in this country.<sup>96</sup> In many countries of the continent, the steady decline of soil quality towards barrenness and desertification is problematic. The desertification problem covers the whole of North Africa and many areas in other parts of the continent (such as Madagascar). Africa is highly affected by flood. According to Norwegian Refugee Council (2010, 2011) after 2008 we have witnessed at least 10 major floods in the region (mostly in Nigeria, Burkina Faso and Benin)<sup>97</sup>.

Environmental displacement in Asia is determined by both gradual environmental processes, the consequences of human activities and natural

---

<sup>95</sup> The Sahel area repeatedly fell victim to great drought and famine. Lasting from the late sixties to mid eighties, catastrophic drought in the countries of that region led to the death by starvation of over a half million people; cf C. Legum, *Africa contemporary record. Annual survey and documents*, vol. 17, 1988, p. 95; R.A. Bryson, T.J Murray, *Climates of Hunger: Mankind & The World's Changing Weather*, 1979, p. 95.

<sup>96</sup> T. Odumosu, W. Atere, F. Adewunmi, *Social problems and social work in Nigeria*, 2000, p. 202; A. Osuntokun, *Environmental problems in Nigeria. With special emphasis on northern Nigeria*, 1999, p. 6.

<sup>97</sup> See M. Yenotani, *Displacement due to Natural Hazard-Induced Disasters. Global Estimates for 2009 and 2010*, IDMC & NRC, Oslo, 2011; *Monitoring disaster displacement in the context of climate change. Findings of a study by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre*, OCHA, IDMC, NRC, Oslo-Geneva, June 2010.

disasters. Every year, floods lead to the temporary displacement of at least 8 million people. Growing cause of temporary displacement are also consequences of earthquakes in seismic areas (Turkey, Iran, Pakistan). Increasing soil salinity and desertification presents an environmental crisis in many regions of the continents. This characterises, among other places, extensive areas of southern China, Kazakhstan, the Iranian plateau, and the Aral Sea regions. Many times, the only solution to the steadily decreasing crops and increasingly limited grazing capacity caused by soil salinity is to move to other areas. Particularly important in recent years were population displacement from the area of South-East Asia instigated by the tsunami of December 2004. The great wave, induced by an earthquake beneath the Indian Ocean, deprived over 230,000 people of their lives. As a result, many thousands of people in vulnerable areas (particularly in Indonesia and Sri Lanka) have decided to migrate to areas more distant from the coastline.<sup>98</sup> The events of December 2004 also caused the displacement of over 1.5 million people in the six countries most affected by the tsunami.

Rising ocean levels are a major problem threatening the existence of some of the archipelagic states and many coastal areas of other countries. Particularly vulnerable to this process at present are the countries of the South Pacific and Oceania: Tuvalu, Kiribati, Marshall Islands, Palau, Papua and New Guinea, Nauru, and the Republic of Maldives.<sup>99</sup> In the past five years, nearly a third of Tuvalu Island's small population of 11 thousand have emigrated. A rise in sea levels of but one centimetre per year would cause a complete flooding of that country in less than fifty years. At the moment, especially high risks associated with the rise of the oceans are having a particular impact on the two archipelagic states of Western Polynesia: Tuvalu and Kiribati. According to UN forecasts, they may be completely inundated by the rising waters of the Pacific by 2050. (Since 1993, global sea levels have been rising at a rate of

---

<sup>98</sup> K. Koser, *International migration. A very short introduction*, 2007, p. 120; B.P. Lorente, *Asian migrations. Sojourning, displacement, homecoming and other travels*, 2005, p. 26.

<sup>99</sup> B.E. Johansen, *The global warming desk reference*, 2002, p. 158; Ch.C. Park, *The environment. Principles and applications*, 2001, p. 514.

about 3.26 mm. per year.) Over the past sixty years, the level of the Pacific surrounding western Polynesia has increased by more than 12 centimetres.<sup>100</sup> On the basis of agreements signed by the authorities of Tuvalu, all the inhabitants of the island, in the event of an imminent threat to its existence, will be evacuated to the territory of New Zealand. According to Lilian Yamamoto of Kanagawa University the biggest challenge is such cases “is to preserve their nationality without a territory”<sup>101</sup>. The possibility of resettlement of the Fiji and Kioa islands populations or purchase of land in Australia is also under consideration. The threat of total flooding is just as pertinent to the islands of Maldives, famous mainly for their developed tourism.

### 1.1 Case Study: Rising sea levels – the situation of the Maldives archipelago population

The Maldives are an archipelagic island state in the Indian Ocean. The Maldives consist of nearly 1,200 islands, embedded in 26 reef atolls. The country is inhabited by almost 400,000 people, and is also visited by more than 300,000 tourists a year. The biggest problem facing this mainly tourism-based country is now the rising ocean level due to climate change.

The first alarming predictions about the future of the archipelago appeared in the mid-eighties of the last century. According to experts, sea level will rise by 0.8 to 2 meters by 2100. This means a total inundation of more than 80 percent of the archipelago islands. These predictions can be considered highly probable at the moment. Measurements made in the Maldives showed that the average increase in sea level is 8 millimetres per year. As a result of rising water level in recent years, the residents of over 30 islands were already evacuated. The weight of the problem faced by the Maldives became a global issue in the wake of the devastation of a large part of the country by the December 2004 tsunami. The Asian tsunami of December 26, 2004 killed 82 people, displaced more than 12,000 and caused extensive

---

<sup>100</sup> J.A. Church, N.J. White, J.R. Hunter, “Sea-level rise at tropical Pacific and Indian Ocean Islands”, *Global and Planetary Change*, vol. 53, no. 3, September 2006, pp. 155-168; F.M.A. Harris, *Global environmental issues*, 2004, p. 57.

<sup>101</sup> „Rising sea level could erase island nations from the face of Earth”, Asian News International, 2009.

damage to the country's most important tourism industry. It was then decided to surround the capital island with a concrete dam. The cost of this project, estimated at more than \$60 million, was entirely covered by the Japanese government. Inter-state negotiations are also underway regarding the future of the country's population. Up for discussion is whether to temporarily evacuate or completely relocate the population to one of the less vulnerable countries in the region or to Australia. If the previously observed trends do not change, the whole area of the state will disappear beneath the ocean surface in 150-200 years. Therefore, it is necessary to take action to prevent this process (which will hopefully be made possible by the development of new construction technologies). In 2007, UNDP launched a special expert program, monitoring the changes in the ocean in the region. The situation of the archipelago was also discussed in 2009 at the World Climate Conference in Copenhagen.

The future of Maldives, remaining only in the realm of speculation, shows the increasing correlation between environmental changes and many spheres of social life. Environmental problems already constitute one of the main issues in the economic forums, multilateral meetings, and activities of international organisations. However, many researchers suggests that Maledives sea level is not rising. According to Nils-Axel Möerner from Stockholm University there is evidence of sea level fall in the last 30 years in that Indian Ocean area<sup>102</sup>.

\*\*\*

Europe, in recent years, has been free from major threats to the environment. The biggest European ecological disaster in recent decades was a nuclear power plant accident at Chernobyl in Ukraine, on the 26th of April 1986. The town of Prypyat, population of 49000, were evacuated two days after the accident<sup>103</sup>. As a result of irradiation, more than 136 thousand people were relocated from the surrounding areas.<sup>104</sup>

Potential causes of environmentally induced displacement in the Western hemisphere may

---

<sup>102</sup> N.A. Möerner, M. Tooley, G. Possnert, „New perspectives for the future of Maldives”, *Global and Planetary Change*, vol. 40, no. 1-2, January 2004, pp. 177-182.

<sup>103</sup> R.E. Ebel, *Chernobyl and Its Aftermath. A Chronology of Events*, CSIS, Washington, 1994, p. 14

<sup>104</sup> S.S. Juss, *International migration and global justice*, 2006, p. 170; Z.A. Medvedev, *The legacy of Chernobyl*, 1992, p. 197; P.L. Martin, S. Forbes Martin, P. Weil, *Managing migration. The promise of cooperation*, 2006, p. 60.

stem primarily from the effects of industrial accidents and unexpected disasters. One of the greatest natural disasters in recent years was Hurricane Katrina in August 2005. During more than a week of activity, it claimed over 1,800 lives and forced more than half of the population of New Orleans to flee.<sup>105</sup> The total number of persons temporarily displaced as a result of hurricane damage is estimated at nearly two million. Another significant natural hazard is the increased tectonic activity in the Gulf of Mexico, the Caribbean Basin, and the East Coast of the United States. In the Haitian earthquake of January 2010, more than 230 thousand people died and another 300,000 were injured. This disaster resulted in droves of survivors leaving the ruined city and the most vulnerable areas, fearing the possibility of aftershocks. In July 2010, the refugee camps established in Haiti were still inhabited by over 1,5 million people displaced from the completely destroyed areas of the island (especially Port-au-Prince and its surrounding areas). Natural disasters both moderate and massive give birth to social consequences difficult to deal with, often over many decades (since it takes so much time to rebuild the village destroyed by fire, volcanic eruptions, or earthquakes, or to achieve complete revitalisation of destroyed agriculture).

The activity of the international community in disaster affected people takes place on a relatively small scale. The problem is, in fact, treated as a sphere of activity internal to each country. Currently, over 90 percent of environmentally induced displacement takes place over relatively small distances (mostly disaster-induced displacement and short-time organized evacuation).<sup>106</sup> Quite often, it is difficult to distinguish between displacement due to environmental processes (desertification, land degradation, coastal erosion, ect.) and migrations undertaken due to economic reasons. The increase in the scale of global environmental disruptions (such as rising sea levels), however, causes more and more environmentally induced displacements to be of a trans-national character. Extensive measures (both practical help and extensive theoretical reflection on the revision of existing legal arrangements) are therefore required to ensure the best possible functional conditions for EDPs. The ongoing changes in the environment have been a subject of reflection for

---

<sup>105</sup> In the state of Louisiana 1,577 people were killed as a result of the hurricane. Material losses in that state were estimated as upwards of 90 billion dollars, cf. D.A. Farber, J. Chen, *Disasters and Law. Katrina and beyond*, 2006, p. 151; J.I. Levitt, M.I. Whitaker, *Hurricane Katrina. America's Unnatural Disaster*, vol. 87, 2009, p. 251.

<sup>106</sup> L.C. Gray, *Environmental Refugees or Economic Migrants*, <http://www.prb.org/Articles/2010/environmentalmigrants.aspx>.

international organisations for several decades. Together with a high-level of activity there comes no greater support to the people displaced due to environmental conditions.

The growing scale of the problem of environmental displacement forces the international community to take extensive institutional and legal measures. The 1951 Geneva Convention does not apply to environmental refugees (whether people displaced within countries or those crossing borders between them). According to a contemporary system of international law, refugee status arises when events occur as a result of violence conflicts (fleeing persecutions)<sup>107</sup>. The definition of a refugee, contained in the 1951 Convention, therefore does not take into account environmental problems or disasters (both natural and man-made) as the source of this problem. It seems that, given the changing forms and number of different groups of refugees in the world, the only way of helping this group constitutes a revision of the solutions adopted to date and an extension of the traditionally understood categories of refugees under international law, or the creation of new solutions governing the status of that group<sup>108</sup>. The question of the legal status, prospects for international recognition and forms of humanitarian assistance of environmentally induced displaced people ('environmental refugees') requires a comprehensive legal and policy framework. The worst possible solution is to restrict the analyzes to be divided into categories of refugees and internally displaced persons. Looking at the response we have to reach into the four categories of public international law: international refugee law, human rights, international environmental law and humanitarian law, as well as policy-oriented perspectives.

Another unsolved issue under international law is the whole catalogue of direct effects upon communities resulting from environmental change. The right to a healthy environment, alongside the right to sustainably and peacefully develop that environment as the common

---

<sup>107</sup> The factors causing migration can therefore be divided into the ones associated with human activity and the ones caused solely by nature; cf M. Zerkovic Bookman, *After involuntary migration. The political economy of refugee encampments*, 2002, p. 8; C. Brettell, J.F. Hollifield, *Migration theory. Talking across disciplines*, 2000, p. 50.

<sup>108</sup> D.C. Bates, „Environmental Refugees? Classifying Human Migrations Caused by Environmental Change”, *Population and Environment*, vol. 23, no. 5, 2002, pp. 465-477; A. Williams, „Turning the tide: Recognizing Climate Change Refugees in International Law”, *Law & Policy*, vol. 30, no. 4, October 2008, pp. 502-529; K. Sramkova, *Involuntary Environmental Migrants: Unprotected*, Lambert Academic Publishing, 2011.

heritage of humankind, is one of the main categories of third-generation human rights. Yet it is mainly of a declarative character.<sup>109</sup> The United Nations has not adopted any binding human rights document on a clean, intact, and ecologically balanced environment. Another tricky situation is that of those who, due to the potential disappearance of their traditional homelands, will be confronted with the possibility of losing their current nationality. In the absence of the territory it is difficult to speak of a state and therefore also of a citizenship.<sup>110</sup> The migrants from the areas which are most at risk of flooding cannot currently expect to receive refugee status.<sup>111</sup> So what practical help is currently offered to environmentally-induced displaced people? As noted by Ilona Korchut, those people are still “doomed to a lottery and the mosaic law of international humanitarian help or its own state law and the various migration policies of countries to whose territories they were forced to go, when fleeing from drought, flood, or dead soil.”<sup>112</sup>

---

<sup>109</sup> The Universal Declaration of Human Rights and other documents in this field do not guarantee, unfortunately, the right to an intact environment and sustainable development of habitat. The group of “environmental” human rights is indeed a later concept; cf. A.E. Boyle, M.R. Anderson, *Human rights approaches to environmental protection*, 1998, p. 2-25.

<sup>110</sup> According to Jelinek’s classical definition, three components that constitute statehood are population, territory, and public authority, cf. K. Tuori, *Ratio and Voluntas. The Tension Between Reason and Will in Law*, Ashgate, 2011, p. 42.

<sup>111</sup> Archipelagic state authorities do not have a chance of receiving compensation for environmental degradation; no entity can be held liable for effects of these environmental changes.

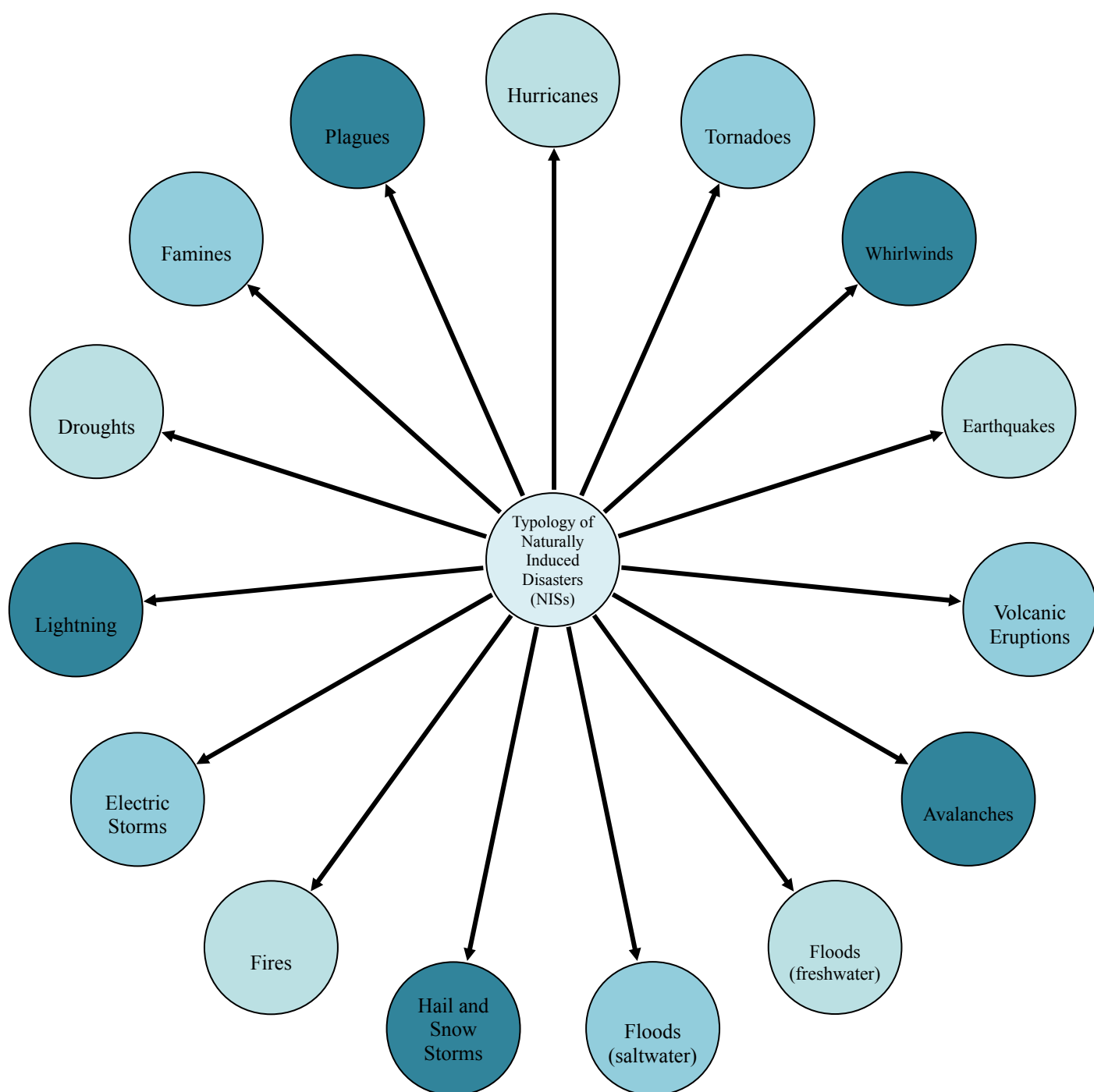
<sup>112</sup> I. Korchut, “Uchodźstwo ekologiczne. Ogólnoświatowy problem, którego nie ma?” *Pomagamy. Nowoczesne Pismo Wolontariuszy*, nr 20, p. 11.

## **PART TWO:**

# **THE MOST COMMON CAUSES OF ENVIRONMENTALLY-INDUCED DISPLACEMENT**

### **2.1 THE TYPES OF NATURAL DISASTERS**





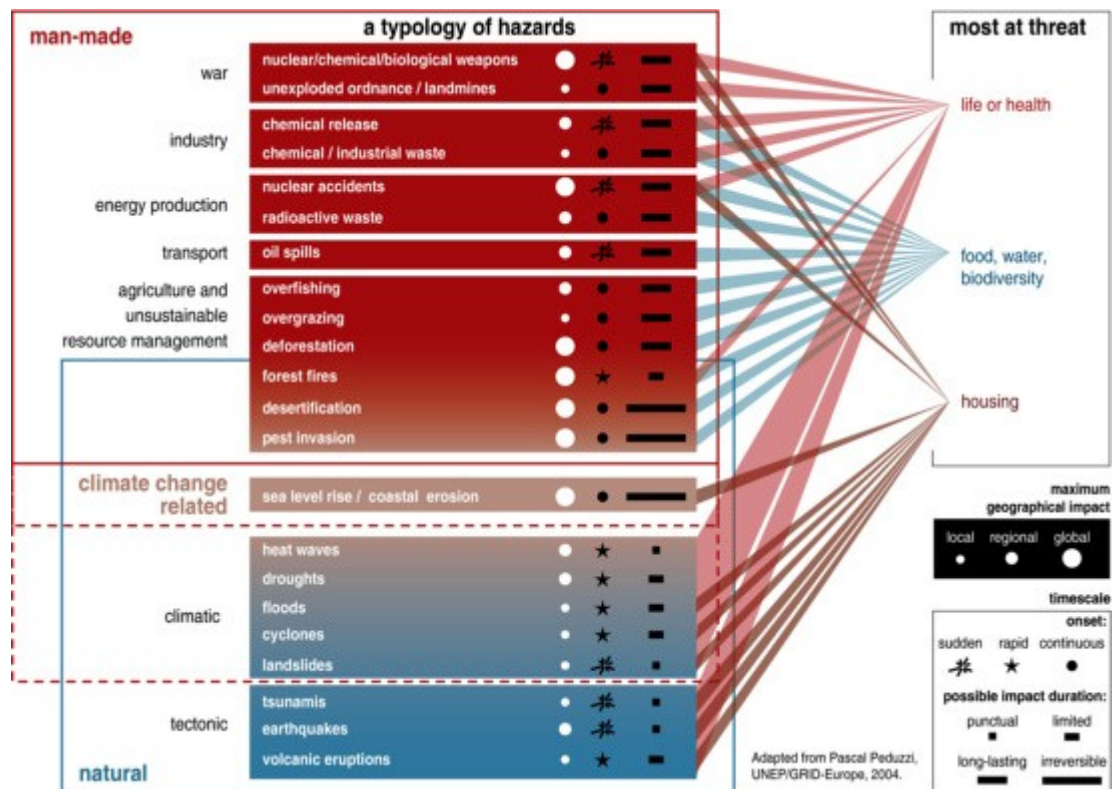
Source: Hugo G., "Environmental Concerns of International Migration", *International Migration Review*, vol. 30, no. 1, Spring 1996, pp. 105-131.

## OECD General Typology of Natural Disasters

Drought
Famine
Tidal wave, Tsunami
Earthquake
Flood
Wild fire
Epidemic
Insect infestation
Wind storm
Extreme temperatures
Volcano

Source: J. Dayton-Johnson, *Natural Disasters and Adaptive Capacity*, Working Paper no 237, OECD Development Centre, August 2004.

Typology of Hazards, UNEP/GRID-Europe, 2004.



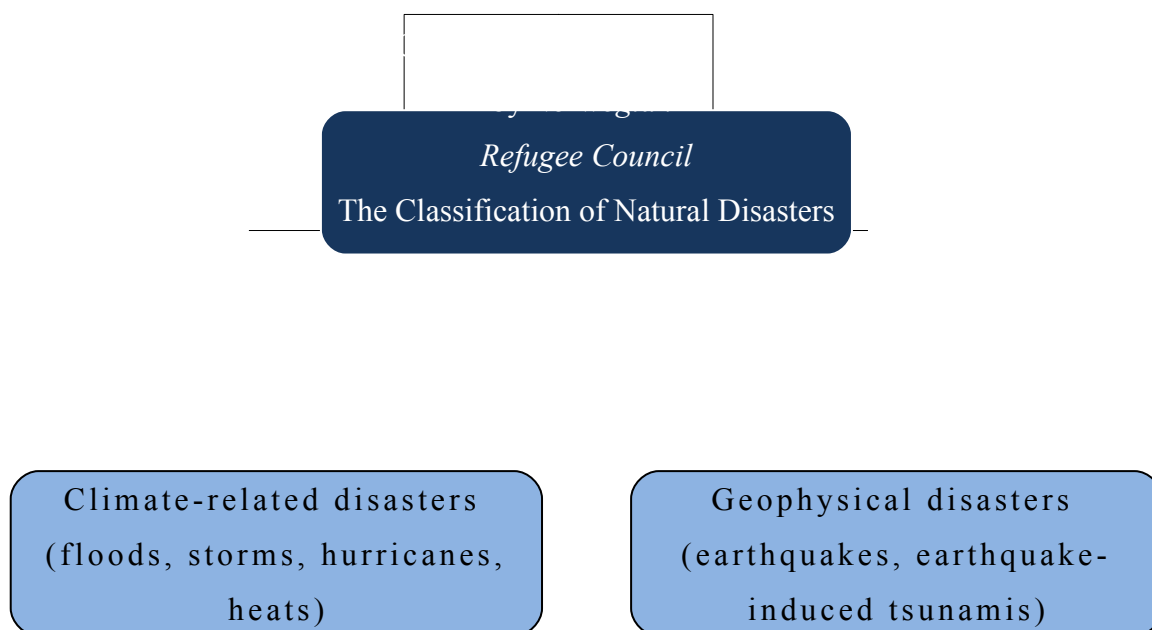
Source: Typology of Hazards. (2005). In *UNEP/GRID-Arendal Maps and Graphics Library*., Copyright: Adpated from Pascal Peduzzi, UNEP/GRID-Europe, 2004, Designer: Emmanuelle Bournay, (UNEP/GRID-Arendal).

#### LIST OF THE MOST COMMON NATURAL DISASTERS:

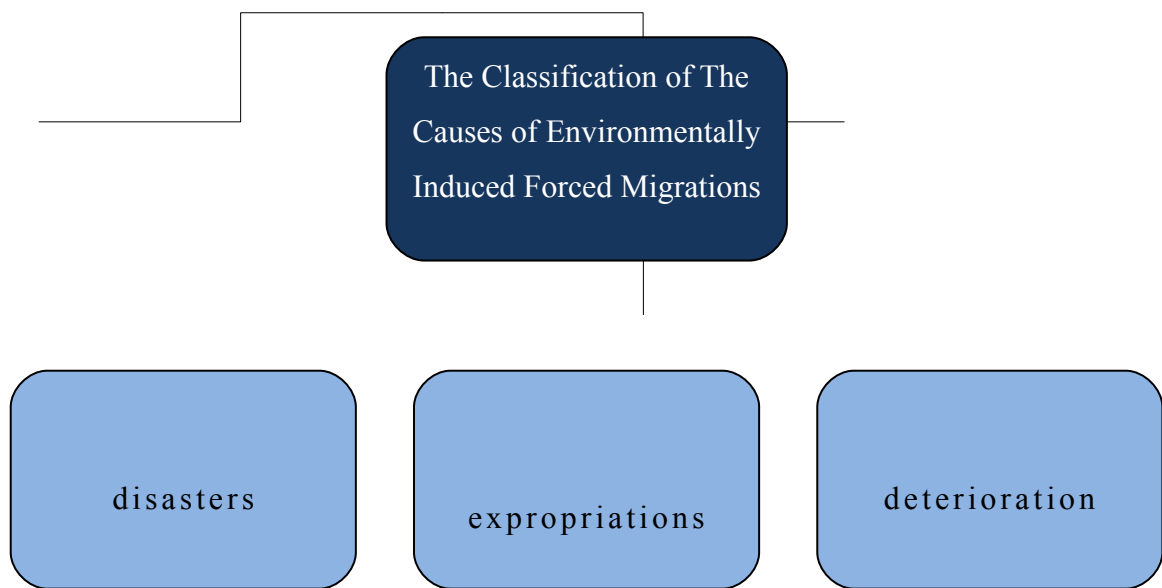
Avalanches	Famines	Storms (non-cyclone)
Blizzards	Floods and landslides	Tornadoes
Contractible diseases	Heat waves	Tsunamis
Cyclones and Hurricanes	Limnic eruptions	Volcanic eruptions
Earthquakes	Meteorites	Wildfires and bushfires

See also: M.R. Berren, A. Beigel, "A typology for classification of disasters", *Community Mental Health Journal*, vol. 16, no. 2, 1980, p. 103-111.

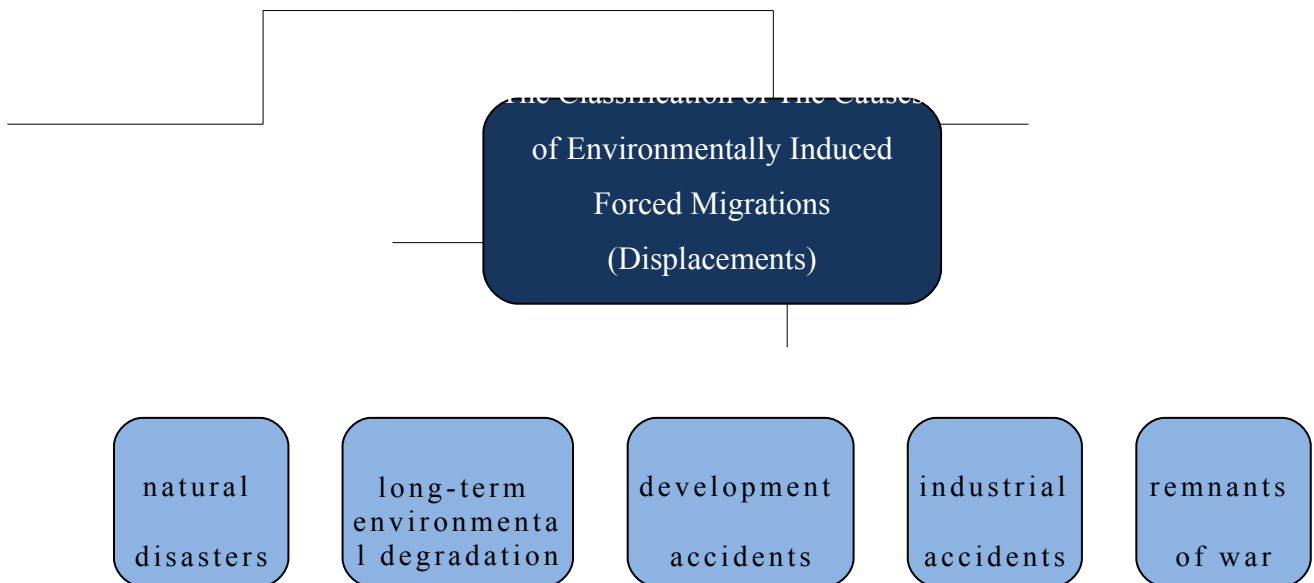
#### Norwegian Refugee Council (NRC) Classification of Natural Disasters



Source: M. Yenotani, *Displacement due to natural hazard-induced disasters. Global estimates for 2009 and 2010*, Internal Displacement Monitoring Centre, Oslo, 2011; *Monitoring Disaster Displacement in the Context of Climate Change. Findings of a study by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre*, OCHA-IDMC-NRC, Oslo-Geneva, June 2010.



Source: D. Bates, "Environmental Refugees? Classifying Human Migrations Caused by Environmental Change", *Population & Environment*, vol. 23, no. 5, 2002, p. 475.



Source: Keane, 2004.

## 2.2 THE MOST COMMON CAUSES OF ENVIRONMENTALLY-INDUCED DISPLACEMENT (ALPHABETICAL ORDER):

**Chemical and Radioactive Contamination:** Forced displacement as a result of radioactive or chemical contamination is often considered to be an extremely rare occurrence. However, such a disaster is not limited to the failure of nuclear power plants or chemical plants. Risks may also include environmental degradation caused by the improper exploitation of oil production platforms as well as big oil spills. Thus, we can distinguish at least three main reasons for these natural disasters:

- a) **Accidents at nuclear plants (Chernobyl 1986, Fukushima 2011):** The creation of a closed buffer zone (Chernobyl Nuclear Power Plant Exclusion Zone), along with the resettlement of its entire population, was a direct result of the Chernobyl nuclear disaster. All 50,000 Pripjat residents were evacuated after the accident over the course of a single day. More than 50,000 square kilometres of the Ukraine are contaminated;
- b) **Accidents at Chemical Plants (e.g. the Ajka Alumina plant accident in Hungary on October 4, 2010):** Resulting from the failure of the aluminum smelter in the Hungarian town of Ajka, about 700 thousand cubic meters of liquid were leaked, containing, among other things, iron oxide and sodium hydroxide. Around 400 people were temporarily displaced (evacuated).
- c) **Land Contamination following the exploitation of natural resources (e.g. environmental degradation in the Niger Delta):** Oil-related environmental problems include gas flaring, oil spills, and dredging of canals. Oil tanker disasters may lead to contamination of local ecosystems and force thousands of inhabitants to migrate. Each of the above-mentioned disasters and risks may constitute a decisive factor in forcing people from their homes.

**Current sea level rise:** Rising sea levels are likely to become one of the main causes of forced migratory movements in this century. Low coastal zones

(with a coast equal to or lower than 10 meters) account for only two percent of the earth's mass, but up to ten percent of the world's population and thirteen percent of its urban population. The 2007 report, *Environment and Urbanizations*, says that 634 million people live in coastal areas within 30 feet (9 m) of sea level. A rise in sea levels is not limited to small island states (atoll states). Rather, about 60 percent of the world's biggest cities with more than five million people are located in low-lying coastal areas. (Eleven of the world's fifteen largest cities are on coastal plains). Indeed, over 70 percent of the world's population lives on coastal plains.

According to researchers' estimates, sea level rose between 20 and 40 centimetres during the last century. In 2001, the Intergovernmental Panel on Climate Change projected a global rise of 9cm to 88cm (3.5 to 34.6 inches) in sea levels between 1990 and 2100. In 2007, the Intergovernmental Panel on Climate Change (IPCC) predicted that global warming would lead, by 2100, to a rise in the ocean level of 180 to 590 mm. According to a significant number of researchers, ocean levels will rise from at least 1.5 to 2 meters over the next 100 years. According to Nicholls (et al.), a "pragmatic estimate of sea-level rise by 2100, for a temperature rise of 4°C or more over the same time frame, is between 0.5 m and 2 m – the probability of rises at the high end is judged to be very low"<sup>113</sup>. According to the present author's estimation, the projected magnitude of this phenomenon could forcibly displace at least 187 million people worldwide.

The areas most vulnerable to the effects of increasing sea levels seem to be from the highly populated coasts of China as well as the southern coasts of the Mediterranean, the west coast of Africa (Nigeria), South Asia (Bangladesh, Sri Lanka, India), and many small island states (Maldives, Tuvalu, Palau, Kiribati, Marshall Islands, Papua New Guinea, and Nauru). Residents of China appear to be particularly at risk from the long-term effects of sea level rise. China has particularly high rates of urbanisation along its coastline. It is estimated that a

---

<sup>113</sup> R.J. Nicholls, N. Marinova, J.A. Lowe, S. Brown, P. Vellinga, D. de Gusmão, J. Hinkel, R.S. Tol, „Sea-level rise and its possible impacts given a 'beyond 4°C world' in the twenty-first century”, *Philos Transact A Math Phys Eng Sci*, 369 (1934), January 13, 2011, p. 161-181.

one-metre rise could force the displacement of more than 12.4 million residents of Shanghai. Over half of Bangladesh's population lives in lower coastal plains. According to Brown (2004), a one-meter rise would force the evacuation of over 40 million people. A sea-level rise of about 40 centimetres could sink 11 percent of the Bangladeshi coastline and force more than 10 million people to migrate from their homelands. In 1995, half of Bhola Island in Bangladesh (also called Dakhin Shahbazpur) became permanently flooded, leaving over 500,000 people homeless. The Bhola Islanders are often described as some of the world's first refugees caused by a sea-level rise.

The situation of the inhabitants of the archipelago of the Maldives has become particularly well-known in recent years. A rise in the ocean level of just 1 metre would swamp about 85 percent of the country's capital island, Malé, which harbours 60,000 people on just 600 hectares of land. It is estimated that even a rise of just 20 centimetres could create over 750,000 environmentally induced displaced people in Nigeria. This problem may also touch other African countries like Niger, Senegal, the Gambia, or Egypt. Rising ocean levels will eventually pose a problem for the western hemisphere as well (the United States, Argentina, Chile) and even European countries (Great Britain).

**Deforestation:** Deforestation is one of the main consequences of the process of industrialization, especially of the extraction of natural resources (such as oil). Wasteful deforestation can lead to an irreversible imbalance in the natural environment (as in the Amazon Jungle), or the growing scale of the desertification of soils. Increasing the scale of deforestation in many countries (for example in China) have enormous environmental consequences, forcing many people to migrate. According to United Nations analysis Nigeria has the world's highest deforestation rate, Brazil loses the largest area of forest annually, and Congo consumes more bushmeat than any other tropical country. Amazon deforestation currently is considered as one of the greatest environmental problems in last years. Deforestation in the Brazilian Amazon dropped nearly 46 percent from August 2008 to July 2009. Desertification

continues to be a major problem facing China's environment, despite efforts to expand forest cover and plant trees.

**Desertification, Soil Salinity:** Desertification is considered as one of the world's most alarming global environmental problems. It is also the primary cause of environmentally induced displacement in many regions of the world. The term "desertification" has been in use since 1949 when French ecologist and botanists Andre Aubreville published a book entitled *Climate, Forets et Desertification de l'Afrique Tropicale*. He defined desertification as the changing of productive land into a desert as the result of ruination of land by man-induced soil erosion. According to many estimates, desertification affects at least 135-250 million people worldwide. However, some scientists argue that only in China does the problem of desertification concerns more than 400 million people. Primary areas of the world that are affected by desertification is Sahel region, as well as Southern Africa (the Kalahari Desert), China (the Gobi Desert) and Latin America.

As Kofi Annan said in 2006, "If we don't take action, current trends suggest that by 2020 an estimated 60 million people could move from desertified areas of sub-Saharan Africa towards North Africa and Europe, and that worldwide, 135 million people could be placed at risk of being uprooted". According to Allen and Ober (2008) over 67 million people in the Sahel already exist under the effects of desertification. Desertification of soils appears to be one of the fundamental causes of hunger in many regions of the world.

Soil degradation is actually very dangerous phenomenon in land degradation and has severe effects on soil functions. To the most important causes of soil degradation we can include deforestation, overgrazing and various agricultural activities. According to Salfrank and Walicki (2005) over a half of total Central Asian land area is prone to desertification and over 80 percent of total land area in Turkmenistan and Uzbekistan is affected by salinization and desertification.



**Droughts:** The problem of drought in many regions of the world seems to be particularly associated with the process of desertification. We can define drought as an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. The so called Sahelian-drought, that began in 1986 took place in sub-Saharan Africa was responsible for deaths of between 100,000 and 250,000 of the region's inhabitants. The dry period in Sahelian Region was accentuated by two severe droughts in the early 1970s and 1980s. It is estimated that Sahel drought killed some 100,000 people and displaced millions in that time. A direct consequence of the drought-induced famine was also a large scale of internal displacement and at least 0.5 million refugees in the region. A 2011 drought in East Africa was described as "the worst in 60 years".

**Earthquakes:** Earthquakes are another type of natural disaster that brings about specific consequences in countries with a high population density rate. Given the currently observed phenomenon seems reasonable to distinguish two categories of natural disasters caused by earthquakes: 1. displacement as a result of direct action of earthquake (for example the consequences of the 2003 Bam earthquake in Iran) and 2. displacement caused by earthquake induced tsunami wave (mainly characteristic for coastal areas). Environmentally-induced displacement associated with the increasingly frequent after 2004 tsunami will be discussed in another part of the present study.

Particularly at risk the consequences of grand earthquakes seems now highly populated Asian countries (China, India and Japan). Another area of frequent occurrence of earthquakes is also South America (especially the areas of Chile and Peru) and a pool of the Caribbean Sea. The largest earthquakes in recent years have been (not including earthquake induced tsunami waves): earthquake in Haiti in 2010 (over 227,000 people killed), Sichuan Province in China in 2008 (over 87,000 dead), earthquake in Bam (Iran) in 2003 (31,000

killed), Gujarat in India in 2001 (21,000 killed).

ESTIMATED NUMBER OF PEOPLE DISPLACED AS A RESULT OF THE BIGGEST EARTHQUAKES IN RECENT YEARS (NOT INCLUDING EARTHQUAKE GENERATED TSUNAMIS):

Year	Earthquake/Country	Number Displaced
May 1960	Valdivia, Chile	2 million (displaced)
December 1988	Spitak, Armenia	100,000 (displaced)
May 2003	Northern Algeria, Algeria	180,000 (homeless)
December 2003	Bam, Iran	45-75,000 (displaced?)
August 2005	Pakistan	4 million (homeless)
October 2005	Kashmir, Pakistan	3.5 million (displaced)
May 2006	Indonesia	600,000 displaced
May 2008	East Sichuan, China	15 million (evacuated)
October 2008	Baluchistan Province, Pakistan	215,000 (displaced)
July 2009	Yunnan Province, China	250-450,000 (displaced)
September 2009	Southern Sumatra, Indonesia	451,000 displaced
January 2010	Haiti Region	1.3 million displaced
February 2010	Chile	1.5-2 million displaced (estimated?)

The presented list does not take into account tsunami waves resulting from earthquakes. The above figures are estimates only.

**Earthquake generated tsunamis:** Caused by the tsunami wave huge disasters show us numerous threats of coastal states. Tsunami wave is generated by underwater earthquakes. However, tsunami takes the radically different nature than the ordinary earthquake. Thus it seems reasonable to distinguish the tsunamis as a separated category of natural disasters. The 2004 Indian Ocean earthquake and resulting tsunami affected many countries in Southeast Asia and beyond, including Sri Lanka, Indonesia, India, Thailand, the Maldives, Somalia, Myanmar, Malaysia, Seychelles and others.

LIST OF THE DEADLIEST EARTHQUAKE GENERATED TSUNAMIS IN RECENT YEARS:

Date	Country/Region/Synopsis	Total deaths	Total displaced
24.12.2004	Indian Ocean Earthquake,	297,000 people	1,690,000 people
30.09.2009	Sumatra earthquakes, Indonesia	1,112 people	700-1000 people
11.03.2011	Sendai earthquake, Japan	10, 000 people	590,000 people

LIST OF THE FIVE DEADLIEST EARTHQUAKE GENERATED TSUNAMIS IN HISTORY:

Year	Event	Total death (estimated)
2004	Indian Ocean Earthquake/Tsunami	229-297,000 people
1908	Messina Earthquake/ Tsunami	123,000 people
1755	Lisbon Earthquake/Tsunami/Fire	100,000 people
1883	Krakatau Volcanic Eruption/Tsunami	36,000 people
1705	Hoei Earthquake/Tsunami	30,000 people

**Famine, diseases:** In my opinion, famine is not an independent factor determining the dynamics of environmentally-induced displacement. It seems rather a consequence of long-term environmental changes (particularly desertification, drying up rivers, drought) or sudden natural disasters (earthquakes, hurricanes, etc.). Famine is therefore a consequence of particular type of negative processes.

**Floods:** In considering the issue of forced resettlement we very often forget about the consequences of flooding. This fact, however, seem illegitimate, especially since in many countries around the world are the dominant determinant of disaster induced displacement. Effect of flooding on the dynamics of environmentally-induced displacement are especially evident in countries without becoming victims of internal armed conflict or other spectacular natural disasters (such as tsunamis, earthquakes or volcanic eruptions). The consequences of flooding for the operation of the unit may

take diverse in nature. Very often they are associated with short-term evacuation of population from the territory under threat. After the cessation of flooding, people can return to their homes. Many floods cause irreversible damage, however, forcing many thousands (or even million) of people to permanent change their place of current residence. Most floods seem to be out of the big river basins in Asia Yangtze, Yellow River and Mekong. Among the countries in the region most touched by the great floods we should mentioned: China, Bangladesh, Sri Lanka, Pakistan and Vietnam as well as Central and Southern American States. The following is a list of the deadliest Floods in history:

Event	Year	Death toll
Central China Floods (China)	1931	2,500,000-3,700,000 (estimated)
Huang He Flood (China)	1887	900,000-2,000,000 (estimated)
Huang He Flood (China)	1938	500,000-700,000 (estimated)
Yangtze river flood (China)	1935	145,000 (estimated)
St Felix's Flood (Netherlands)	1530	100,000 + more (estimated)
Red River Delta Flood (Vietnam)	1971	100, 000 (estimated)
Yangtze river flood (China)	1911	100,000 (estimated)
Banqiao Dam (China)	1971	86,000 (estimated)

Source: J. Levy, *World's Worst Floods*, The Rosen Publishing Group 2008.

We can observe the biggest impact of flooding in areas with a higher rate of urbanisation. The 2007 South Asian floods in India, Nepal, Bhutan, Pakistan, and Bangladesh displaced approximately 20-30 million people. More than a million people in southern China were forced to flee their homes by major flooding in June 2008. Floods in Pakistan (July 2010) killed over 1700 people and affected more than 20 million. Another big flood in Colombia (December 2010) forced over 2.2 million people nation-wide out of their homes. Floods and the displacement they cause can also result from the construction of dams. (This occurred, for instance, in China in 1971 and Nigeria in 2010.). Short-term nature of some natural disasters is an argument for the separation of disaster-induced displacement from the more

general context of environmentally-induced displacement.

Reports of Norwegian Refugee Council and International Displacement Monitoring Centre (2010, 2011) draw attention to the potential of mass displacement caused by floods in many Asian, African and South American Countries. But let us note that the flood induced displacement is often short-lived (evacuation). The table below illustrates examples of flooding in recent years, involving the large scale of human displacement.

Country	Date (d-m-r)	Total affected	Total displaced
Philippines	30.12.2008	875306	205974
India	25.09.2009	2000000	2500000
China	1.07.2009	39372000	938000
India	1.07.2009	1886000	500000
Brasil	22.04.2009	500000	500000
Bangladesh	3.07.2009	500000	500000
Sri Lanka	14.12.2009	302890	302089
China	7.05.2010	230000000	15200000
Pakistan	28.07.2010	20359496	11000000
Colombia	6.04.2010	2234442	1500000
Colombia	1.07.2010	1500000	1500000
Thailand	10.10.2010	8970653	1000000
Mexico	20.09.2010	1000000	810000
Nigeria	13.09.2010	2000000	560000

Source: M. Yenotani, *Displacement due to Natural Hazard-Induced Disasters.Global Estimates for 2009 and 2010*, IDMC & NRC, Oslo, 2011; *Monitoring disaster displacement in the context of climate change. Findings of a study by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre*, OCHA, IDMC, NRC, Oslo-Geneva, June 2010.

**Hurricanes, Tornadoes, and Cyclones:** Hurricanes are another important factor affecting the dynamics of disaster-induced displacement. The United States and many Central American countries are particularly vulnerable to hurricanes. In the U.S., Florida is *particularly prone to hurricanes* because warm seas surround the state. Hurricane Mitch in 1998 was one of the most powerful hurricanes in the twentieth century. Over two million people in Nicaragua were directly affected by

the hurricane (368,000 were displaced from their homes). Floods in Guatemala caused by Mitch destroyed 30,000 houses, displacing over 730,000 people. Hurricane Katrina in August 2008 was one of the five deadliest hurricanes in the history of the United States, as well as one of the costliest natural disasters. Seven states were affected by Hurricane Katrina including Georgia, Florida, Mississippi, Alabama, Louisiana, Kentucky, and Ohio (affected due to floods on the Mississippi River). Over 200,000 homes in New Orleans were destroyed, and more than 800,000 citizens were displaced (the largest displacement in the United States since the Dust Bowl between 1930 and 1936). In Haiti, in 2008, over 6,000 people had to relocate thanks to the devastation of Hurricane Gustav.

Tornadoes, especially common in the United States, are a growing cause of population displacement. More than 250 people were killed and over 70,000 displaced during tornadoes in the Mid-Eastern U.S. in April 2011.

**Land Degradation, Inappropriate Agricultural Practices:** Human-induced soil degradation is now one of the leading causes of environmentally displacement. Environmental consequences of poor farming are currently visible in the vast majority of developing countries. The most famous example of the demographic consequences of bad agricultural practices was the Dust Bowl. Environmentally induced displacement is a consequence of so-called 'Slash-and-burn agricultural technique', a primitive form of economy practiced in many parts of the world to this day. According to Roshan Cooke (et al.):

"Primary causes of land degradation are related to recurrent droughts and the existence of severe aridity, increase in human populations and associated growth in livestock populations, and inappropriate national agricultural and human settlement policies. Land degradation can be a slow process, or extremely rapid depending on the environmental and social conditions. The resulting outcome however is a reduced carrying capacity of the land due to the loss of ecosystem functions"<sup>114</sup>.

The major causes of land degradation include: land clearance, agricultural

---

<sup>114</sup> R. Cooke, T. Jallow, S. Lafleur, M. Laman, J. Njoroge, V. Nyagah and E. Obas (eds.), *Promoting Farmer Innovation. Harnessing local environmental knowledge in East Africa*, UNDP – Office to Combat Desertification and Drought (UNSO/SEED/BDP), 1999, p. 27.

depletion, overdrifting, urban sprawl and land pollution.

**Volcanic Eruptions:** Volcanic Eruptions are another cause of disaster-induced displacement. Every year they force tens of thousands of people to evacuate, mostly in vulnerable areas of the world, such as the Indonesian Island Sumatra, Ecuador, many African countries. The Erta Ale volcanic eruption in Ethiopia (September 2005) forced 6,500 nearby residents to flee. The Tungurahua eruption in Ecuador (August 2006) also displaced more than 6,500 people. In December 2005, Mount Karthala erupted in Comoros, displacing over a third of the country's population. According to a United Nations OCHA Agency report, approximately 175,000 people were said to have "inadequate access to clean drinking water due to the contamination of watertanks". The volcano Pacaya eruption in May, 2010, with over 100,000 Guatemalans estimated to be displaced. The next big eruption was in August 2010: Mount Sinabung in Sumatra forced over 30,000 people to evacuate. At least 25,000 people were seriously affected by the eruption of Bromo (Java, Indonesia) in December 2010. The following table lists the deadliest volcanic eruptions in the world (Estimated death tolls are approximate.):

Year	Event/Volcano	Death toll	Cause of deaths
1815	Tambora, Indonesia	92,000	Starvation
1883	Krakatau, Indonesia	36,417	Tsunami Wave
1902	Mt Pelee, Martinique	29,025	Ash Flows
1985	Ruiz Vol., Colombia	25,000	Mudflows
1792	Unzen, Japan	14,300	Volcanic collapse, tsunami

**Wildfires:** Wildfires and bushfires constitute yet another phenomenon producing irreversible environmental changes. In many countries around the planet, (especially the United States, Australia, and Russia) such fires appear to be the most frequent natural disasters. The aftermath of a fire may not only require evacuation from danger, but can also instigate permanent migration. It is thus important to note

that irreversible consequences of fires can very often bring about permanent resettlement. The largest wildfire-induced displacement in recent years has taken place in the United States and in Australia. Wildfires in California in 2007 gutted 2000 homes, displaced 640,000 people, and caused more than one billion dollars in damage. The Black Saturday Bushfires, which burned across the Australian State of Victoria (7 February 2009 to 14 March 2009), affected 78 townships in total and displaced an estimated 7,562 people. More than 17,000 people were displaced due to wildfires in Israel in December 2010 (41 people died). We should also take into account the many smaller wildfires occurring in most countries of the world.



## PART THREE:

### COMMENTS AND BIBLIOGRAPHICAL NOTES

The aim of the following part of the work is a bibliographic review of literature on the impact of environmental changes upon the various forms of displacement. Of course, the bibliographic summary developed by the present author is by no means exhaustive. However, according to the conception presented in the preface, it does reflect the most representative and significant directions of research over the past few decades in the field of environmental determinants of internal displacement. The intensification of scientific discourse in this field observed in recent years means that even a brief and cursory attempt to provide a full picture of the current research is extremely difficult, if not impossible. Let us remember that environmental motivations are, in addition to economic and political factors, one of the key determinants of decisions about place of residence. These factors constituted (and in some

areas of the world continue to constitute) a decisive determination of human spatial mobility. The currently observed consequences of long-term environmental hazards or catastrophic natural disasters have become, in recent years, one of the largest global social problems and pose a key challenge for the international community. Therefore, the number of scientific studies in this area will certainly increase significantly.

The 1980s generally mark the beginning of the currently observed shape of research on environmentally-induced displacement. Works published at that time by El Hinnawi, Jacobson, and Tickell (and, a bit later, works by Myers, Westing, and Suhrke) affected the shape of the research carried out in that field over the last two decades to a decisive extent. We should, however, remember that the issue of environmental factors of displacement is difficult to limit to considerations of definitions and theory. Extensive theoretical studies are, rather, an attempt to synthesize and conceptualize the previously observed processes, as well as to anticipate hazards likely to affect us in the future. (The case of Tuvalu seems a particularly apt example.) We should also bear in mind that a lot of research on environmental determinants of displacement (e.g. the process of land degradation and desertification) has been carried out decades earlier, in the sixties and even the thirties of the last century (Dust Bowl).

Empirical studies must form an equally important component in our research, constituting a basis for analyzing a variety of consequences of natural disasters or lasting changes within the natural environment. “Global warming” – and the resulting changes in ocean levels – appear to represent just a portion of some highly diverse studies on the social consequences of long-time environmental disruptions. Currently, we are also researching many other processes affecting the dynamics of internal displacement. We can include among these, for instance, the rising salinity of groundwater, desertification, and soil erosion. The negative impacts of these processes on the functioning of individuals (such as poverty, famine, difficult access to drinking water, increased incidence of certain diseases, the problem of child mortality, etc.) are now, for many millions of people around the world, a key factor in the decision to change residence.

In addition to permanent changes in the environment, natural disasters have become an increasingly important threat to human flourishing. The great natural disasters witnessed over the last decade – like the 2004 tsunami wave, Hurricane Katrina (2005), the earthquake in 2005 and devastated floods in 2010 in Pakistan, 2008's Cyclone Nargis in Myanmar, the 2010 earthquake in Haiti, and the earthquake-induced tsunami in Japan (2011) – forced several million people to temporary or permanently migrate. Extensive studies of the consequences of major natural disasters for population mobility constitute, in recent years, a particularly important and worthy course of research.

Investigation into the social consequences of environmentally-induced displacement has taken a truly interdisciplinary character in recent years. The analyses in this area are carried out on the ground of at least a dozen areas of expertise. The results of in-depth analysis (carried out by climatologists, hydrologists, ecologists, and specialists in natural disasters) provide us with a scientifically verifiable and objective basis for the studies and projections to be formulated later in the fields of demography and population studies (as well as migration studies), political science, international relations, and public international law. The practical results of such inquiry are difficult to overestimate at present. Detachment from the consideration of real problems of real people (conducted, for example, on the basis of political science) seems both reckless and devoid of scientific validity. Analyzing the specific context of that issue it is worth mentioning a few strands of research carried out on the social consequences of environmentally-induced displacement.

Various studies from the field of climatology have recently had a particularly significant impact on the field of environmentally induced displacement. In their analysis of the potential for climate change in different parts of the world, they include the possible impacts on human living conditions. Researchers in the discipline of ecology focus in turn on the broad impact of environmental processes on complex ecosystems. Their area of interest includes, for example, the adaptability of various mammalian species to sudden environmental changes in a specific territory. It is the limited ability to adapt to changing environmental conditions which appears to be a root cause of migration in animals and humans.

Studies undertaken on that issue, on the basis of geography, demography, population studies, and migration studies, focus primarily on the analysis of the consequences of environmental change on human spatial mobility (both globally and in individual countries or regions). Therefore, the experts in the field of demography pay attention to the importance of ecological factors for the change of population distribution, the gradual depopulation of certain areas, and increased mortality rates in a given area. The consequences of specific processes of environmental change, therefore, affect the population potential of a given location. A similar approach is adopted in the research of environmental factors, undertaken on the basis of migration studies. They focus on analyzing the impact of environmental changes on the decision to undertake migration. It seems crucial at this point to clearly define relations between specific migratory behaviour and the scale of underlying threats (as opposed to more static population studies, this research is an analysis of the dynamics rather than an extensive reflection on *faits accomplis*). Several specialists draw attention to the impact of refugee migration movements on the environment (K. Jacobsen, G. Kibreab)<sup>115</sup>.

The issue of environment-related shifts in population is also playing a more important role in certain fields of health sciences. Experts in the field of medical sciences (e.g. epidemiologists) draw attention to the environmental deterioration of the overall ground state of health in a given area. Equally important problems characteristic of many natural disasters include health risks, problems of reverting, and adaptation to the ravaged territory. The issue of consequences of permanent environmental changes or big natural disasters is connected with the issue of realising one's right to health vis-à-vis state authorities or international institutions.

Research on environmentally-induced displacement, undertaken on the basis of political science, are now focusing on at least some categories of threats. Particularly relevant at this point are the studies undertaken in this field on the basis of security studies (Suhrke, Westing, Homer-Dixon). Already in the early nineties specialists from the Nordic countries drew attention to the relationship between environmental changes and the dynamics of armed

---

<sup>115</sup> K. Jacobson, „Refugees' Environmental Impact: The Effect of Patterns of Settlement”, *Journal of Refugee Studies*, vol. 10, no. 1, March 1997, p.19-36; G. Kibreab, "Environmental Causes and Impact of Refugee Movements: A Critique of the Current Debate", *Disasters*, vol. 21, no. 1, 1997, p. 20-38.

conflict and the enormous political potential of environmentally-induced displacement<sup>116</sup>. As with other categories of forced migrations, environmental displacement is also a source of a variety of threats to security. Therefore, we can talk about demarcating a space for security within the discussion of climate change. Studies undertaken in this scope translate into specific political decisions. Already today we can speak of, for example, germs of a common EU climate policy or of environmentally induced displacement as a challenge to the common security policy (especially in the context of potential dynamics of refugee flows from various African states).

The issue of environmentally induced displacement has also been important for conflict studies over the course of the last few years. Disputes based on environmental issues now appear to be one of the fundamental causes of many internal armed conflicts in numerous regions of the world (especially the Middle East and Africa). Environmentally-induced displacement increasingly tends to be much more a political phenomenon than many of the other forms of human mobility well-established in our consciousness (e.g. labour-related migration). We should thus remember two procedurally separate categories of environmentally-induced displacement: a) displacement due to environmental reasons (the key *push factor* of population mobility is the direct impact of certain environmental factors, b) conflict-induced displacement caused by internal armed conflict on environmental grounds (a major factor of change of residence is the danger associated with armed conflict, which may have environmental disputes at its roots – such as access to drinking water, certain deposits, or natural resources). An important direction for inquiry includes the consideration of migration undertaken on the basis natural disasters. Nowadays we can mention a special kind of causal triad, shaping the face of internal displacement in many African countries: Environment-Conflict-Displacement.

Environmentally-induced displacement are also of interest to development studies. Adverse changes in the environment seem to be particularly dangerous for developing countries. Development Studies must rise to the challenge of precisely defining the environmental threats facing developing nations and making a concerted effort to eliminate these threats. The

---

<sup>116</sup> The concept of 'environmental security' ranges from the mid-eighties, initially under the intellectual influence of so-called Copenhagen School of security studies.

growing activity of some South-East Asian countries (e.g. Bangladesh) and Oceania (e.g. New Zealand and a number of atoll states) to counter environmental threats seems to be extremely positive. The analyses, carried out in recent years, of the impact of environmental changes on the sphere of sustainable development, appear to be particularly valuable research perspectives.

The situation of environmentally-displaced persons is now a critical point in the study of migration policies of various states, international refugee law, and international human rights law. EDPs are more often seen as a fully autonomous category of internally displaced persons, and therefore distinct from the other types of IDPs. The processes of depoliticization, feminization, economization, and ecologization of contemporary migration face the international community with the necessity of far-reaching changes in conceptualizing international standards for the protection of migrants. The forecasted nature of climate change also pushes the international community up against many as yet unprecedented obstacles. Never before in known history have we had to deal with threats such as the immanent loss of a whole territory following a rise in sea level. The issue of the social consequences of climate change has also never been as significant as the current issues requiring international cooperation. Risks like those mentioned above are facing international organizations with the need to cooperate when having to take drastic action (both institutional and normative).

The present author's bibliographic guide is a reflection of the very diverse nature of the research into environmental determinants for population mobility. Therefore, in the preparation of this study, the present author tried as far as possible to depict environmentally-induced displacement as a fully autonomous and interdisciplinary category of research. For this reason, this review does not refer more broadly to other forms of migration which do not have a strictly environmental character. Therefore, its subject is neither development-induced displacement nor various forms of politically motivated internal displacements.

As I mentioned above, this publication does not constitute an exhaustive bibliographic source. The purpose of the adopted system of bibliography is primarily to broadly present research achievements in this field. The bibliographic system presented in this work (name, initials of

the author) is thus of a brief character. The present author has tried to quote as accurately as possible all the names, titles, and other parts of this development, keeping the original spelling. For any remaining mistakes and shortcomings the present author must therefore bear sole responsibility, and once again apologize for possible omissions overlooked in the course of work, including the obvious omission of many publications relevant to the subject matter. However, it is impossible to prepare a listing presenting the achievements of scientific centres from dozens of countries, without being somewhat selective. The main aim in preparing this study was to demonstrate the social consequences of environmentally-induced displacement in all their complexity, with reference to the various fields of knowledge and achievements of as many research centres as possible. Due to the limited access to many titles, this listing refers a good deal to the publications of more well-known authors, or those written in highly esteemed research centres. Limited access to many publications (issued for example in Asian or African countries and the research centres of some European countries) makes – for obvious reasons – this publication refer to the titles which have the widest availability and, therefore, the most famous.

In order to maintain clarity of the review, the bibliography was divided into four distinct parts. In addition to presenting books, chapters in collective works and articles in scientific journals, particularly important for the development of this issue, the present author has also made references to many extremely valuable analyses, reports and working papers. The increase in professional scientific literature on the environmental determinants of migration, observed in recent years, is an extremely important and positive phenomenon. Yet, while the number of available publications in the field continues to rise, it does not reflect the gravity of the situation vis-à-vis its connection to human rights, security, and the need for international cooperation. Many of the aforementioned problems have found to date only a marginal and fragmentary reflection in specialized scientific literature. The lack of rigorous studies on the evolution of environmental migration throughout history, the social consequences of natural disasters, and the protection of environmentally displaced people, becomes particularly evident in this context as a growing problem of relevance to the international protection of human rights. In addition, many parts of the world lack studies addressing the problems of environmental determinants of migration altogether. A large number of studies in the field of

environmentally-induced migrations in the countries of South Asia (such as in Bangladesh) or Oceania is accompanied by a small number or even a complete lack of similar studies on the regions of Central and Southern Africa and Europe. The social implications of environmental changes are currently not limited to a few chosen problems or areas of the world. Therefore, it is vital, going forward, to more broadly examine the relationship between the currently observed climate changes and the various forms of human spatial mobility.

\* \* \*

The main themes of the publications listed in the present book include the following:

- 1.** Theoretical approaches to environmentally induced displacement (aspects of terminology and definitions, conceptualisation of research problems, etc.);
- 2.** Selected aspects of research into the relationship between environment, displacement and vulnerability (including, for instance, approaches related to ecology, climate studies, hydrology, geology, or the study of natural disasters);
- 3.** The addition of environmentally displaced people ('environmental refugees') as a category of participants in migration processes;
- 4.** The compilation of data for the interplay between population mobility and the changes of the natural environment (especially, but not limited to: land degradation, soil desertification, drought, rising sea levels, the increasing salinity of groundwater, forest thinning, etc.);
- 5.** Analysis of the social implications of climate change, when it forces people to change their place of residence (as in the cases of famine, deteriorating housing conditions, lack of access to drinking water supplies, health problems, increased mortality, etc.);
- 6.** Obtaining regional data in order to differentiate amongst the environmental situation of displaced people in various regions (especially in Africa, South-east Asia, the



Middle East, and North and Central Africa);

7. Integrating environmentally-induced displacement as a research problem for public international law;
8. Including the situation of environmentally displaced people as a problem of human rights protection and a locus of activity for international institutions (e.g. the UN, the UNHCR, the IOM, IPCC, the Council of Europe, the European Union);
9. Investigating the relationship between migration and the environment when it comes to issues of human safety and global security.
10. Involving environmentally induced displacement as a research subject for international relations, political science, economics, sociology, and development studies.
11. Examining the consequences of natural disasters as a causative agent in internal displacement (especially in the scope of great natural disasters of the last decade).

## PART FOUR:

### BIBLIOGRAPHY

#### 4.1 Books

- Afifi T., Jäger J. (ed.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin 2010.
- Alekseev A.Y., Marian Scott E., Zaitseva G. (eds.), *Impact of the environment on human migration in Eurasia*, Kluwer Academic Publishers, Dordrecht-Boston-London, 2004.
- Aubreville A., *Climats, Forêts et Désertification de l'Afrique Tropicale*, Société d'Éditions Géographiques, Maritimes, et Coloniales, Paris, 1949.
- Bachelet M., *L'ingérence écologique*, Edition Frison-Roche, Paris, 1995.
- Barnett J., Campbell J., *Climate Change and Small Island States: Power, Knowledge and the South Pacific*, Earthscan, London, 2010.
- Behnke R. (ed.), *The Socio-Economic Causes and Consequences of Desertification in Central Asia*,

- Springer, Berlin, 2008.
- Beniston M., *Changements climatiques et impacts. De l'échelle globale à l'échelle locale*, PPUR Presses Polytechniques, Lausanne, 2009.
- Betts A., *Global Migration Governance*, Oxford University Press, Oxford, 2011.
- Biermann F., Pattberg P., Zelli F., *Global Climate Governance Beyond 2012. Architecture, Agency and Adaptation*, Cambridge University Press, Cambridge 2010.
- Black R., *Refugees, environment and development*, Longman, Singapore 1998.
- Black R., Robinson V., *Geography and refugees: patterns and processes of change*, Belhaven Press, London, 1993.
- Boberg J., *Liquid assets: how demographic changes and water management policies affect freshwater resources*, Rand Corporation, Santa Monica, 2005.
- Brauch H.G. (ed.), *Security and environment in the Mediterranean: conceptualising security and environmental conflicts*, Springer, Berlin, 2003.
- Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*, Institute of Policy Studies, School of Government, Victoria University Wellington, 2010.
- Carlsson B., *Magna charta of human environment: (environment, population and migration) : the Swedish experience with reference to Agenda 21*, PM bokforl, Gamleby, 1996.
- Catanese A.V., *Haiti's refugees: Political, economic, environmental (Latin America)*, Universities Field Staff International, 1991.
- Chalifour N.J., *Land use law for sustainable development*, Cambridge University Press, Cambridge, 2007.
- Challen P., *Migration in the 21st Century: How Will Globalization and Climate Change Affect Human Migration and Settlement?*, Crabtree Publishing Company, St Catherines, 2010.
- Climate change as a security risk*, Wissenschaftliche Beirat der Bundesregierung Globale Umweltveränderungen, Earthscan, London, 2008.
- Climate Refugees*, Collectif Argos, Massachusetts Institute of Technology Press, Cambridge (MA), 2010.
- Cometti G., *Réchauffement climatique et migrations forcées. Le cas du Tuvalu*, Cahiers de L'Institut de hautes études internationales et du développement (IHEID), Genève, 2010.
- Corlett D., *Stormy Weather: The Challenge of Climate Change and Displacement*, University of New South Wales Press Ltd, Sydney, 2008.
- Cournil Ch., Colard-Fabregoule C. (eds.), *Changements climatiques et défis du droit: Actes de la journée d'études du 24 mars 2009*, Bruylant, Bruxelles, 2010.
- Crow I., *The Quest for Food: Its Role in Human Evolution and Migration*, The History Press LTD,

- London, 2000.
- Cubides F., Domínguez C. (eds.), *Desplazados, migraciones internas y reestructuraciones territoriales*, Bogotá, Centro de Estudios Sociales -CES- Universidad Nacional de Colombia, vol. 1, 1999.
- Dalby S., *Security and environmental change*, Polity, Stafford, 2009.
- Dalton D., *Environmental Migrants*, Paw Prints, Pleasantville 2008.
- Derman B., Odgaard R., Sjaastad E. (eds), *Conflicts over Land and Water in Africa*, James Currey: Oxford, 2007.
- Desertification: Migration, Health, Remediation and Local Governance*, (International Conference), Bruxelles : Académie Royale des Sciences 2009.
- Faye B., Esenov P., *Desertification combat and food safety: the added value of camel producers*, IOS Press, 2005.
- Geist H., *The causes and progression of desertification*, Ashgate Publishing Ltd., Farnham, 2005.
- Gemenne F., *Géopolitique du Changement Climatique*, Armand Colin, Paris, 2009.
- Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2010.
- Haavio M., *Migration and the Environment: Instrument Choice Matters*, Discussion Paper, no. 51, University of Helsinki, Helsinki, February, 2005.
- Hambright K.D., Ragep F.J., Ginat J. (eds.), *Water in the Middle East: cooperation and technological solutions in the Jordan Valley*, University of Oklahoma Press, Oklahoma, 2006.
- Haque C.E., *Hazards in a Fickle Environment: Bangladesh*, Kluwer Academic, Dordrecht, 1997.
- Humphreys S., *Climate Change and Human Rights: A Rough Guide*, International Council on Human Rights Policy, Geneva, 2008.
- Humphreys S., *Human rights and climate change*, Cambridge University Press, Cambridge, 2009.
- Hunter L.M., *The environmental implications of population dynamics*, Rand Corporation, Santa Monica, 2000.
- Hogan D.J., *Demographic Aspects of Global Environmental Change. What is Brazil's Contribution*, Brasil, 2001.
- Islam M., "Ecological catastrophes and refugees in Bangladesh", Conference on Worldwide Refugee Movements, New York, 1991.
- Jacobson J.L., *Environmental refugees: A yardstick of habitability*, Worldwatch Institute, Washington, 1988. (Worldwatch Paper, 86).
- Johnson J-P., Mayrand K., Pacquin M. (eds.), *Governing global desertification. Linking environmental degradation, poverty and participation*, Ashgate Publishing Ltd., Farnham, 2006.

- Kepner W.G., Rubio J.L., Mouat D.A., Pedrazzini F. (eds.), *Desertification in the Mediterranean region: a security issue*, Springer, Berlin, 2006.
- Khalil S.E., *The socio-economic and political implications of the environmental refugees in the vicinity of Omdurman*, Institute of Environmental Studies, University of Khartoum, Khartoum, 1987.
- King V.T., *Environmental challenges in South-East Asia*, Routledge, London, 1998.
- Kwesi Darkoh M.B., Rwomirev A., *Human impact on environment and sustainable development in Africa*, Ashgate Publishing Ltd, Farnham, 2003.
- Leach M., Mearns R., *The Lie of the Land: Challenging Received Wisdom on the African Environment*, International African Institute with James Currey and Heinemann, Oxford and Portsmouth, 1996.
- Leckie S., Simperingham E., Bakker J., *Climate Change and Displacement Reader*, Routledge, New York, 2011.
- Leiderman S.M., *Comprehensive Portfolio on Environmental Refugees and Ecological Restoration*, University of New Hampshire, Durham, 2000.
- Lever-Tracy C., *Routledge Handbook of Climate Change and Society*, Routledge, London, 2010.
- Loftus-Farren Z., *Protecting People and the Planet. A Proposal to Address the Human Rights Impacts of Climate Change Policy*, DIANE Publishing, Derby, 2010.
- MacCallum M., *Girt by sea: Australia, the refugees and the politics of fear*, Black Inc, Sydney, 2002.
- Magniny V., *Les réfugiés de l'environnement, hypothèse juridique à propos d'une menace écologique* (thèse de droit), Université de droit Panthéon Sorbonne, Paris, 1999.
- McAdam J. (ed.), *Climate change and displacement. Multidisciplinary perspectives*, Hart Publishing, London 2010.
- McDowell Ch., Morrell G., *Displacement Beyond Conflict: Challenges for the 21st Century*, Berghahn Books, New York, 2010.
- Milan S., *Searching for a Place Under the Sun*, Inter Press Service, Rieti, 2004.
- Morgan S., *Changing Planet: What is the Environmental Impact of Human Migration and Settlement?*, Crabtree Publishing Company, New York, 2010.
- Mortimore M., Adams W.M., *Working the Sahel: environment and society in northern Nigeria*, Routledge, New York, 1999.
- Myers N., *Ultimate Security: The Environmental Basis of Political Stability*, W.W. Norton and Company, New York, 1993.
- Myers, N. (1995). *Environmental Exodus. An Emergent Crisis in the Global Arena*, Climate Institute, Washington, 1995.
- Neumann J., *Human Rights and Climate Change: International Human Rights as an Instrument for*

- Measures of Equalization?*, Grinn Verlag, 2011.
- Newman E., van Selm J. (eds.), *Refugees and Forced Displacement. International Security, Human Vulnerability, and the State*, United Nations, New York, 2003.
- O'Brien K., Asuncion Lera St, Berit Kristoffersen, *Climate Change, Ethics and Human Security*, Cambridge University Press, Cambridge 2010.
- O'Neill B.C., MacKeller F.L., Lutz W., *Population and climate change*, Cambridge University Press, Cambridge, 2001.
- Peluso N.L., Watts M. (eds.), *Violent Environments*, Ithaca-New York, Cornell University Press, 2001.
- Perout A.M., *Environmental refugees. Defining environmental migrants and long term solution to deal with environmental migration*, Concordia University, Montreal, 1995.
- Piguet E., Pecoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011.
- Portnov B.A., Hare A.P. (eds.), *Desert regions: population, migration, and environment*, Springer, Berlin, 1999.
- Rahman M.H., Climate change impacts and adaptation strategies for Bangladesh, International Training Network Centre, BUET, 2009.
- Rain D., *Eaters of the Dry Season – Circular Labor Migration in the West African Sahel*, Westview Press, Boulder Colorado, 1999.
- Ramlogan R., *The developing world and the environment: making the case for effective protection of the global environment*, University Press of America, Lanham M.D., 2004.
- Réfugiés Climatiques*, Editions INFOLIO, Paris, 2007.
- Rubio J.L., Safriel U., Daussa R., Blum W.E.H., Pedrazzini F. (eds.), *Water Scarcity, Land Degradation and Desertification in the Mediterranean Region: Environmental and Security Aspects*, Springer, Berlin, 2009.
- Samal K.Ch., *Informal sector: concept, dynamics, linkages & migration*, Concept Publishing Company, New Delhi, 2008.
- Sandberg L.A., Sandberg T. (eds.), *Climate Change - Who's Carrying the Burden? The Chilly Climates of the Global Environmental Dilemma*, Canadian Centre Policy Alternatives, Ottawa, 2010.
- Sanders T.G., *Northeast Brazilian environmental refugees*, Universities Field Staff International and the Natural Heritage Institute, Indianapolis, 1991.
- Saphiro H.L., *Migration and environment*, Ayer Publishing, Manchester, 1978.
- Simms A., Conisbee M., *Environmental refugees: the case for recognition*, New Economics Foundation, London, 2003.

- Sinha P.C., *Human population and related disasters*, Anmol Publications PVT. LTD., New Dehli, 1998.
- Smil V., *Global ecology: environmental change and social flexibility*, Routledge, London, 1993.
- Sramkova K., *Involuntary Environmental Migrants. Unprotected*, Lambert Academic Publishing, Saarbrücken, 2010.
- Stojanov R., Novosak J. (eds.), *Migration, development and environment. Migration processes from the perspective of environmental change and development approach at the beginning of the 21st century*, Cambridge Scholars, Newcastle upon Tyne, 2008.
- Stroock D., *An introduction to Markov processes*, Birkhäuser, Basel, 2005.
- Suhrke A., Hazarika S., *Pressure points: environmental degradation, migration and conflict*, American Academy of Arts and Sciences, 1993.
- Tafesse T., *The migration, environment and conflict nexus in Ethiopia: A case study of Amhara migrant-settlers in East Wollega Zone*, Organization for Social Science Research in Eastern and Southern Africa (OSSREA), Addis Ababa, 2007.
- Tan Y., *Resettlement in the Three Gorges Project*, Hong Kong University Press, Hong Kong, 2008.
- Taylor T.G., *Environment, race, and migration: fundamentals of human distribution*, University of Toronto Press, Toronto, 1949.
- Timberlake L., *Environmental wars & environmental refugees. The political background to the Cartagena convention*, London, Earthscan, 1983.
- Tubiana L., Gemenne F., Magnan A., *Anticiper pour s'adapter: Le nouvel enjeu du changement climatique*, Pearson Education France, Paris, 2010.
- Unruh J.D., Krol M.S., Kliot N. (eds.), *Environmental change and its implications for population migration*, Springer, Berlin, 2004.
- Uscher-Pines L., *The Physical Health Impacts of Post-Disaster Displacement*, VDM Verlag, Saarbrücken, 2008.
- Van Der Erf R., Heering L. (eds.), *Causes of international migration: proceedings of a workshop, Luxembourg, 14-16 December 1994*, DIANE Publishing, Darby, 1994.
- Wall J., *Climate Change Refugees*, Cengage Learning Australia, Sydney, 2009.
- Ward E.M., *State responsibility at international law for the creation of environmental refugees and internally displaced peoples in Africa*, University of Lund, Lund, 1993.
- Warrick R.A., Barrow E.M., Wigley T.M.L. (eds.), *Climate and sea level change. Observations, projections and implications*, Cambridge University Press, Cambridge, 1993.
- Webersik Ch., *Climate change and security. A gathering storm of global challenges*, ABC-Clio, New York, 2010.

- Werner D. (ed.), *Biological resources and Migration*, Springer, Berlin-New York, 2004.
- Westra L., *Environmental justice and the rights of ecological refugees*, Earthscan, London, 2009.
- Wilson G.A., *Unravelling desertification: Policies and actor networks in Southern Europe*, Wageningen Academic Publishers, Wageningen, 2005.
- Wisner B., *At risk. Natural hazards, people's vulnerability and disasters*, Routledge, London, 2004.
- Zaelke D., Kaniaru D., Kružíková E. (eds.), *Making Law Work; Environmental Compliance & Sustainable Development*, Cameron May International Law & Policy, London, 2005.

## 4.2 CHAPTERS IN BOOKS

- Adepoju A., Guchteneire P.F.A., "Creating a borderless West Africa: constraints and prospects for intra-regional migration" [in] Pecoud A. (ed.), *Migration without borders: essays on the free movement of people*, Berghahn Books, New York, 2007, pp. 161-175.
- Afifi T., "The Environmental Root Causes Triggering Economic Migration: The Case of Egypt" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 197-210.
- Ahmed I., "Environmental Refugees and Environmental Distress Migration as a Security Challenge for India and Bangladesh" [in] Brauch H.G., Oswald Spring U., Grin J., Mesjasz Cz., Kameri-Mbote P., Chadha Behera N., Chourou B., Krummenacher H. (eds.), *Facing Global Environmental Change Environmental, Human, Energy, Food, Health and Water Security Concepts*, (Hexagon Series on Human and Environmental Security and Peace), vol. 4, part 3, 2009, pp. 295-308.
- Alber G., "Gender and Climate Change Policy" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 149-164.
- Alscher S., "Environmental Factors in Mexican Migration: The Cases of Chiapas and Tlaxcala" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 171-187.
- Andersen L., Lund L., Verner D., "Migration and Climate Change" [in] Verner D. (ed.), *Reducing Poverty, Protecting Livelihoods, and Building Assets in a Changing Climate: Social Implications of Climate Change Latin America and the Caribbean*, World Bank Publications, Washington D.C., 2010, pp. 195-221.
- Baechler G., "Environmental degradation in the south as a cause of armed conflict" [in] Carius A., Lietzmann K. (eds.), *Environmental Change and Security: A European Perspective*, Springer,

- Berlin, pp. 107–130.
- Balk D., Montgomery M.R., McGranahan G., Kim D., Mara V., Todd M., Buettner T., Dorélien A., "Mapping Urban Settlements and the Risks of Climate Change in Africa, Asia and South America" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 80-104.
- Barnett J., Chamberlain N., "Migration as Climate Change Adaptation: Implications for the Pacific" [in] Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*, Institute of Policy Studies, School of Government, Victoria University Wellington, 2010, pp. 51-61.
- Bartlett S., "Children in the Context of Climate Change: A Large and Vulnerable Population" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 133-149.
- Bascom J., "The New Nomads. An Overview of Involuntary Migration in Africa" [in] Baker J., Aina T.A. (eds.), *The Migration Experience in Africa*, Nordic African Institute, Uppsala, 1995, pp. 197-219.
- Bedford R., Bedford Ch., "International Migration and Climate Change: A Post- Copenhagen Perspective on Options for Kiribati and Tuvalu" [in] Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*, Institute of Policy Studies, School of Government, Victoria University, Wellington, 2010, pp. 89-135.
- Black R., "Les réfugiés dégradent-ils l'environnement? Exemples au Sénégal et en Guinée", [in] Lassailly-Jacob V., Marchal J-Y., Quesnel A. (eds.), *Déplacés et réfugiés: la mobilité sous contrainte*, Institut de recherche pour le développement (IRD), Paris, 1999, pp. 383-408.
- Bleibaum F., "Case Study Senegal: Environmental Degradation and Forced Migration", [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 187-197.
- Bohrka-Mishra P., Massey D.S., "Environmental degradation and out-migration. Evidence from Nepal" [in] Pigué E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 74-102.
- Boncour P., Burson B., "Climate Change and Migration in the South Pacific Region: Policy Perspectives" [in] Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*, Institute of Policy Studies, School of Government, Victoria University Wellington, 2010, pp. 5-29.
- Brauch H.G., "Security and Environment Linkages on the Mediterranean Space: Three Phases of Research on Human and Environmental Security and Peace" [in] Brauch H.G. (ed.), *Security and environment in the Mediterranean: conceptualising security and environmental conflicts*,



- Springer, Berlin, 2003, pp. 35-145.
- Brauch H.G., "Urbanization and Natural Disasters in the Mediterranean: Population Growth and Climate Change in the 21<sup>st</sup> Century" [in] Kreimer A., Arnold M., Carlin A. (eds.), *Building safer cities: the future of disaster risk*, World Bank Publications, Washington, 2003, pp. 149-165.
- Brauch H.G., "Desertification-A New Security Challenge for the Mediterranean. Policy agenda for recognising and coping with fatal outcomes of global environmental change and potentially violent societal consequences" [in] Kepner W.G. (ed.), *Desertification in the Mediterranean region: a security issue*, Springer, Berlin, 2006, pp. 11-79.
- Bronen A., "Forced Migration of Alaskan Indigenous Communities Due to Climate Change: Creating a Human Rights Response" [in] Oliver-Smith A., Shen X. (eds.), *Linking Environmental Change, Migration and Social Vulnerability*, (SOURCE, no. 11), United Nations University Institute for Environment and Human Security, 2009.
- Bronen R., "Forced Migration of Alaskan Indigenous Communities Due to Climate Change" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 87-99.
- Brown Weiss E., "Protection of the Environment and the International Refugee Law" [in] *Environmental Change and International Law*, United Nations University Press, Tokyo, 1992.
- Burson B., "Environmentally Induced Displacement and the 1951 Refugee Convention. Pathways to Recognition" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 3-17.
- Burson B., "Protecting the Rights of People Displaced by Climate Change: Global Issues and Regional Perspectives" [in] Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*, Institute of Policy Studies, School of Government, Victoria University Wellington, 2010, pp. 159-181.
- Campbell J., "Climate Change and Population Movement in Pacific Island Countries" [in] Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*, Institute of Policy Studies, School of Government, Victoria University, Wellington, 2010, pp. 29-51.
- Campbell J., "Climate-induced community relocation in the Pacific: The meaning and importance of land" [in] McAdam J. (ed.), *Climate Change and Displacement: Multidisciplinary perspectives*, Hart Publishing, Oxford, 2010, pp. 57-79.
- Cardy W.F.G., "Environment and Forced Migration: A Review" [in] Kwesi Darkoh M.B., Rwomire A. (eds.), *Human impact on environment and sustainable development in Africa*, Ashgate Publishing, Ltd., Farnham, 2003, pp. 141-163.
- Castles S., "Concluding remarks on the climate-change migration nexus" [in] Piguet E., Pécoud P., de

- Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 415-427.
- Cernea M.M., "Disaster-related Refugee Flows and Development-Caused Population Displacement" [in] Cernea M.M., Guggenheim S. (eds.), *Anthropological Approaches to Involuntary Resettlement: Policy, Practice and Theory*, Westview Press, Boulder Colorado, 1993.
- Charlebois P.O., "Reconnaissance du statut juridique de réfugié environnemental à titre de mesure d'adaptation aux changements climatiques: Édification d'une nouvelle responsabilité collective en vertu du droit international de l'environnement" [in] 3e Colloque de l'IHQUEDS, Montreal, 2007.
- Chou C.C., "An Emerging Human Security Threat on Pacific Island States: Analyzing Legal and Political Implications of Territorial Inundation" [in] Beny Teh Cheng Guan (ed.), *Human Security. Securing East Asia's Future*, Springer, Dordrecht-Heidelberg-London-New York, 2012, pp. 231-248.
- Cournil Ch., "Les défis du droit international pour protéger les 'réfugiés climatiques'. Réflexions sur les pistes actuellement proposées", [in] Cournil Ch., Colard Fabregoule C. (eds.), *Changements climatiques et défis du droit*, Bruylant, Bruxelles, 2010, pp. 345-372.
- Cournil Ch., "The protection of environmental refugees in international law" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 359-387.
- Dao H., van Woerden J., "Population Data for Climate Change Analysis" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 218-229.
- DeLorey M.M., "Economic and Environmental Displacement" [in] Hollenbach D. (ed.), *Driven from home: protecting the rights of forced migrants*, Georgetown University Press, Washington DC., 2010, pp. 231-249
- Dodman D., "Urban Form, Greenhouse Gas Emissions and Climate Vulnerability" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (ed.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 64-80.
- Edwards A., "Climate Displacement" and International Refugee Law: The Evolving Concept of "International Protection" [in] R. Rayfuse, S. Scott (eds.), *International Law in an Era of Climate Change*, Edward Elgar, 2011.
- Elliott M., Fagan D., From Community to Copenhagen: Civil Society Action on Climate Change in the Pacific [in] Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*, Institute of Policy Studies, School of Government, Victoria University Wellington, 2010, pp. 61-89.

- Enarson E., "A Gendered Human Rights Approach to Rebuilding after Disaster" [in] Adenrale A. (ed.), *Rebuilding Sustainable Communities for Children and Their Families after Disasters: A Global Survey*, Cambridge Scholars, Newcastle Upon Tyne 2010.
- Epiney A., "'Réfugiés écologiques' et droit international" [in] Tomuschat Ch., Lagrange E., Oeter S. (eds.), *The Right to life*, Martinus Nijhoff Publishers, Leiden- Boston, 2010.
- Epiney A., "'Environmanetal refugees': aspects of international state responsibility " [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 388-414.
- Erway Moriniere L.C., "Tracing the Footprint of 'Environmental Migrants' Through 50 years of Literature" [in] Oliver-Smith A., Shen X. (eds.), *Linking Environmental Change, Migration & Social Vulnerability*, United Nations University, New York, 2009.
- Fairhead J., "The conflict over natural and environmental resources" [in] Naffziger W., Stewart F., Vayrynen R. (eds.), *Economic Causes of Complex Humanitarian Emergencies*, Oxford: Oxford University Press, 2000.
- Farah Q.H., "Environmental Displacement in Sub-Saharan African Nations and the Convention of 1951" [in] Fynn V.P. (ed.), *Documenting the Undocumented: Redefining Refugee Status: Center for Refugee Studies 2009 Annual Conference Proceedings*, Universal-Publishers, Water Circle Boca Raton, 2010, pp. 141-149.
- Fernando N., Warner K., Birkmann J., "Migration and Natural Hazards: Is Relocation a Secondary Disaster or an Opportunity for Vulnerability Reduction?" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 145-157.
- Filcak R., "Migration to Contaminated Sites: Migrants' Settlements in Central and Eastern Europe Built-in Places with High Environmental and Social Vulnerability" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 133-145.
- Findlay A., Geddes A., "Critical views on relationship between climate change and migration: some insights from the experience of Bangladesh" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 138-159.
- Flávio Barbieri A., Confalonieri U.E.C., "Climate Change, Migration and Health in Brasil", Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 49-74.
- Jäger J., Frühmann J., "Linking the Earth's Future to Migration: Scenarios of Environmental Change and Possible Impacts on Forced Migration" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 247-263.
- Gemenne F., "What's in a Name: Social Vulnerabilities and the Refugee Controversy in the Wake of

- Hurricane Katrina" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 29-43.
- Gemenne F., "How they became the human face of climate change. Research and policy interactions in the birth of the 'environmental migration' concept" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 225-259.
- Gomes A., "Demography and environmental adaptation: a comparative study of two aboriginal populations in west Malaysia." [in] Arce W.F., Alvarez G.C. (eds.), *Population Change in Southeast Asia*, Institute of Southeast Asian Studies, Singapore, 1983.
- Goria A., "Desertification and migration in the Mediterranean. An analytical framework" [in] Enne G., D'Angelo M., Zanolla C. (eds.), *Indicators for assessing desertification in the Mediterranean. Proceedings of the International Seminar held in Porto Torres, Italy, 18-20 September, 1998*, pp. 207-223.
- Guzmán J.M., "The Use of Population Census Data for Environmental and Climate Change Analysis" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 192-206.
- Hakim S., "The Role of Climate Change in the Darfur Crisis", [in] Leal Filho W. (ed.), *The Economic, Social and Political Element of Climate Change*, Springer, Heidelberg-Dordrecht-London-New York, 2011, pp. 815-823.
- Hampshire K., "Fulani on the move: Seasonal Economic Migration in the Sahel as a Social Process" [in] de Haan A., Rogaly B. (eds.), *Labour mobility and rural society*, Routledge, London, 2002, pp. 15-37.
- Haque C., "Human responses to riverbank erosion hazard in Bangladesh: Some lessons from indigenous adjustment strategies" [in] Elahi et al. (ed.), *Riverbank erosion, flood hazard and population displacement in Bangladesh*, Riverbank Erosion Impact Study, Dhaka, 1991, pp. 191-217.
- Haavio M., "Migration and the environment" [in] Hanley N., Folmer H. (eds.), *Game theory and the environment*, Edward Elgar, London, 1998, pp. 287.
- Hartmann B., "From climate refugees to climate conflict: who is taking the heat for global warming?" [in] Salih M. (ed.), *Climate Change and Sustainable Development: New Challenges for Poverty Reduction*, Edward Elgar Publishers, Cheltenham, 2009, pp. 142-155.
- Henry S., "L'impact de l'environnement naturel sur la migration au Burkina Faso : Synthèse de l'apport des analyses macro et micro" [in] Ouédraogo D., Piche V. (eds.), *Dynamique migratoire, insertion urbaine et environnement au Burkina Faso: au-delà de la houe*, L'Harmattan Burkina

- Faso & Presses universitaires de Ouagadougou, 2007, pp. 129-161.
- Hollifield M., Thompson Fullilove M., Hobfoll S.E., "Climate Change Refugees" [in] Weissbecker I. (ed.), *Climate Change and Human Well-Being*, Springer, Berlin-New York, 2011.
- Hugo G., "Lessons from past forced resettlement for climate change migration" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 260-288.
- Hunter L.M., David E., "Displacement, climate change and gender" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 306-330.
- Juul K., "Transhumance, tubes and telephones: drought-related migration as a process of innovation" [in] Gausset Q., Whyte M.A., Birch-Thomsen T. (eds.), *Beyond Territory and Scarcity: Exploring Conflicts over Natural Resource Management*, Nordiska Afrikainstitutet, Stockholm, 2005, pp. 112-134.
- Kadirbeyoglu Z., "In the Land of Ostriches: Developmentalism, Environmental Degradation, and Forced Migration in Turkey" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 223-235.
- Kavanagh B., Lonergan S., *Environmental Degradation, Population Displacement and Global Security*, Canadian Global Change Program, Technical Report, December 1992.
- Kelly M., Granich S., "Global warming and environment" [in] Morse S., Stocking M., *People and Environment*, Routledge, London, 1995, pp. 69-109.
- Kempf W., "A Sea of Environmental Refugees? Oceania in the Age of Climate Change" [in] Hermann E. (ed.), *Form, Macht, Differenz: Motive und Felder ethnologischen Forschens*, Universitätsverlag Göttingen, Göttingen, 2009, pp. 191-207.
- Koser K., "Climate change and internal displacement: challenges to the normative framework" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 289-305.
- Kovats S., Lloyd S., "Population, Climate and Health" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 164-176.
- Knerr B., "Desertification and Human Migration" [in] Werner D. (ed.), *Biological resources and migration*, Springer, Berlin, 2004, pp. 317-333.
- Leatherman S.P., "Social and Economic Costs of Sea Level Rise" [in] Douglas B.C., Kearney M.S., Leatherman S.P. (eds.), *Sea Level Rise. History and Consequences*, Academic Press, San Diego, 2001, pp. 181-223.

- Leckie S., "Climate-related Disasters and Displacement: Homes for Lost Homes, Last for Lost Lands" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 119-133.
- Lee S., "In Limbo: Environmental Refugees in the Third World" [in] Gleiditsch N.P. (ed.), *Conflict and the environment*, Springer, Berlin, 1997, pp. 273-293.
- Leighton M., "Drought, desertification and migration: past experiences, predicted impacts and human rights issues" [in] Piguët E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 331-358.
- Lessa W., "The social effects of typhoon Ophelia on Ulithi", *Micronesia*, vol. 1, 1964, pp. 1-47.
- Leighton M., "Desertification and Migration" [in] Johnson M-P., Mayrand K., Paquin M. (eds.), *Governing global desertification: linking environmental degradation, poverty and participation*, Ashgate Publishing Ltd., Farnham, 2006, pp. 43-59.
- Lewis N., "Island in a Sea of Change: Climate Change, Health and Human Security in Small Island States" [in] H.J.S. Fernando, Z.B. Klaić, J.L. McCulley (eds.), *National Security and Human Health Implications for Climate Change*, Springer, 2011.
- Luuginaah I., Weis T., Galaa S., Nkrumah M.K., Benzer-Ker R., Bagah D., "Environment, Migration and Food Security in the Upper West Region of Ghana" [in] Luuginaah I.N., Yanful E.K. (eds.), *Environment and Health in Sub-Saharan Africa: Managing an Emerging Crisis*, Selected Papers from ERTEP 2007, July 17-19 2007, Ghana, Africa, pp. 25-38.
- MacKellar E.L., Lutz W., McMichael A.J., Suhrke A., "Population and Climate Change," [in] Rayner S., Malone E.L. (eds.), *Human Choice and Climate Change*, (vol. 1, The Social Framework), Battelle Press, Columbus, Ohio, 1998, pp. 89-193.
- Malik A., "Information and disaster management in Sudan", [in] Sin A. (ed.), *Disaster Prevention and Management in Sudan*, Khartoum University Press, 1991.
- Martine G., "Population Dynamics and Policies in the Context of Global Climate Change", [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 9-31.
- Mbonile M.J., "Population, Migration, and Water Conflicts in the Pangani River Basin, Tanzania" [in] *Report from Africa. Population, Health, Environment, and Conflict*, 1996, pp. 20-29
- McAdam J., "Refusing 'refuge' in the Pacific: (de)constructing climate-induced displacement in international law" [in] Piguët E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 102-138.
- McLeod D., "Potential Impacts of Climate Change Migration on Pacific Families Living in New Zealand" [in] Burson B. (ed.), *Climate change and migration. South Pacific Perspectives*,

- Institute of Policy Studies, School of Government, Victoria University Wellington, 2010, pp. 135-159.
- Mbonile M.J., "Refugees and Environmental Security in Africa" [in] Poku N., Graham D.T. (eds.), *Redefining security: population movements and national security*, Greenwood Publishing Group, New York, 1998, pp. 149-163.
- McGregor J., "Refugees and the Environment" [in] Black R., Robinson V. (eds.), *Geography and Refugees*, Belhaven Press, London, 1993.
- Miner Fuentes Y., Villagrán de León J.C., "Guatemala: A Review of Historic and Recent Relocation Processes Provoked by Disasters of Natural Origin", [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 157-171.
- Mitchell J.K., Ericksen N.J., "Effects of Climate Change on Weather-Related Disasters" [in] Mintzer I.M. (ed.), *Confronting climate change: risks, implications, and responses*, Cambridge University Press, Cambridge, 1992, pp. 141-153.
- Mutunga C., Hardee K., "Population and Reproductive Health in National Adaptation Programmes of Action (NAPAs) for Climate Change" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 176-192.
- Nasritdinov E., Ablezova M., Abarikova J., Abdoubaetova A., "Environmental Migration: Case of Kyrgyzstan" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 235-247.
- Nicholls R.J., Leatherman S.P., "Global Sea-Level Rise" [in] K.M. Strzepek (ed.), *As climate changes: international impacts and implications*, Cambridge University Press, Cambridge, 1995, pp. 92-124.
- Naude W., "Forced Migration from Sub-Saharan Africa: The Conflict–Environment Link" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 43-57.
- Oliver-Smith A., "Sea level rise, social vulnerability and involuntary migration" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 160-187.
- Philpott S.B., "The Breath of The Beast': Migration, Volcanic Disaster, Place and Identity in Montserrat" [in] King R., Connell J. (eds.), *Small worlds, global lives: islands and migration*, Continuum International Publishing Group, New York, 1999, pp. 137-161.
- Piguet E., "Climate and Migration: A Synthesis" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 73-87.

- Poncelet A., Gemenne F., Martiniello M., Boussetta H., "A Country Made for Disasters: Environmental Vulnerability and Forced Migration in Bangladesh" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 211-223.
- Portnov B.A., "Modeling the Migration Attractiveness of a Region" [in] Portnov B.A., Hare A.P. (eds.), *Desert regions: population, migration, and environment*, Springer, Berlin, 1999.
- Prothero, Mansell R., "Migration in Tropical Africa" [in] Caldwell J.Ch., Okonjo Ch. (eds.), *The Population of Tropical Africa*, Longman, London, 1968, pp. 250-260.
- Quenault B., "Changements climatiques et risques sécuritaires multiples" [in] Serfati C. (ed.), *Une économie politique de la sécurité*, KARTHALA, Paris, 2009.
- Raleigh C., Jordan L., "Climate Change and Migration: Emerging Patterns in the Developing World" [in] Mearns R., Norton A. (eds.), *Social dimensions of climate change: equity and vulnerability in a warming world*, World Bank Publications, Washington, 2010, pp. 104-132.
- Raleigh C., Jordan L., Saleyhan I., *Assessing the Impact of Climate Change on Migration and Conflict*, The Social Development Department, The World Bank Group, Washington D.C., 2009.
- Ramachandran K., Susarla P., "Environmental Migration from Rainfed Regions in India Forced by Poor Returns from Watershed Development Projects" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 117-133.
- Rebetez M., "The main climate change forecasts that might cause human displacements" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 37-49.
- Rechkemmer A., "Societal Impacts of Desertification: Migration and Environmental Refugees?" [in] Brauch H.G., Oswald Spring U., Grin J., Mesjasz Cz., Kimeri-Mbote P., Chadha Behera N., Chourou B., Krummenacher H. (eds.), *Facing Global Environmental Change Environmental, Human, Energy, Food, Health and Water Security Concepts*, (Hexagon Series on Human and Environmental Security and Peace), vol. 4, part 2, 2009, pp. 151-158.
- Reuveny R., "Environmental Migration and Climate Change" [in] Bohme E., Bonser Ch., Spencer K.M. (eds.), *Transatlantic Perspectives on Liberalization and Democratic Governance*, LIT Verlag Münster, Berlin, 2004, pp. 305-332.
- Saad A., "Climate Change, Compelled Migration, and Global Social Justice" [in] Sandberg L.A., Sandberg T. (eds.), *Climate Change - Who's Carrying the Burden? The Chilly Climates of the Global Environmental Dilemma*, pp. 106-120.
- Saadi S., "1998 flood induced displacement: A case study of Jamalpur" [in] Abrar, C.R. and Lama, M.P. (eds.), *Displaced Within Homelands: The IDPs of Bangladesh and the Region*, Dhaka, 2003.



- San Marco P., "Migrations transsahariennes et ensemble eurafricain" [in] Bensaad A. (ed.), *Le Maghreb à l'épreuve des migrations subsahariennes. Immigration sur émigration*, Paris: KARTHALA, 2009.
- Satterthwaite D., "The Implications of Population Growth and Urbanization for Climate Change" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 45-64.
- Sauders P.L., "Environmental refugees: The origins of a construct" [in] Stott, P., Sullivan, S. (eds.), *Political Ecology: Science, Myth and Power*, Arnold, London, 2000.
- Schmidt-Verkerk K., "'Buscando la vida' – How Do Perceptions of Increasingly Dry Weather Affect Migratory Behaviour in Zacatecas, Mexico?" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 99-115.
- Schmink M., "The socioeconomic matrix of deforestation" [in] Arizpe L.P, Stone M.P., Major D.C. (eds.), *Population and environment: rethinking the debate*, Westview Press, Boulder Colorado , 1994, pp.253-76.
- Schwartz M.L., Notini J., "Preliminary report on desertification and migration: case studies and evaluation" [in] Puigdefábrigas J. Mendizábal (ed.), *Desertification and Migrations*, Geoforma Ediciones, Logroño, 1995, 69-113.
- Scully Granzeier M., "Linking Environment, Culture, and Security" [in] Kamieniecki S., Gonzalez G.A., Vos R.O. (eds.), *Flashpoints in environmental policymaking: controversies in achieving sustainability*, SUNY Press, Albany NY, pp. 311-335.
- Shaw R., "'Nature', 'culture' and disasters: Floods and gender in Bangladesh" [in] Croll E., Parkin D. (eds.), *Bush Base: Forest Farm: Culture, Environment and Development*, Routledge, London, 1992, pp. 200-217.
- Shishlina N., "North-West Caspian Sea Steppe: Environment and Migration Crossroads of Pastoral Culture Population During the Third Millennium BC" [in] Scott E.M. et. al (eds.), *Impact of the Environment on Human Migration in Eurasia*, Kluwer Academic Publishers, Dordrecht, 2004, pp. 91-106.
- Singer P., "Migrações internas: Considerações teóricas sobre seu estudo" [in] Moura H. (ed.), *Migração Interna: Textos Selecionados*, Banco de Nordeste de Brasil, Fortaleza, 1980.
- Suhrke A., "Environmental Degradation, Migration, and the Potential for Violent Conflict" [in] Gleiditsch N.P. (ed.), *Conflict and the environment*, Springer, Berlin, 1997, pp. 255-272.
- Swift J., "Desertification: narratives, winners and losers" [in] Leach M., Mearns R. (eds.), *The Lie of the Land: Challenging Received Wisdom on the African Environment*, International African Institute and James Currey, London, 1996, pp. 73-90.

- Tacoli C., "Crisis or Adaptation? Migration and Climate Change in a Context of High Mobility" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 104-119.
- Taylor J.N., "Human capital: Migration and rural population change" [in] Gardner B.L., Rausser G.C. (eds.), *Handbook of Agricultural Economics*, 2001.
- Thomas D.S.G., Middleton N.J., *Desertification. Exploding the myth*, John Wiley and Sons, Chichester, 1994.
- Tschakert P., Tutu R., "Solastalgia: Environmentally Induced Distress and Migration Among Africa's Poor Due to Climate Change" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 57-73.
- Vag A., "Scenarios of Environmental Change and Migration" [in] Stec S., Baraj B. (eds.), *Energy and Environmental Challenges to Security*, IOS Press-Springer, Amsterdam-Dordrecht, 2006, pp. 313-329.
- Vine D., "The Other Migrants: Cause And Prevention In Involuntary Displacement and The Question of 'Environmental Refugees'" [in] *International Migration and The Millenium Development Goals, Marrakech, Marroco, 11-12 May 2005*, UNFPA.
- Vlachos E., "Environmental Refugees: The Growing Challenge" [in] Gleditsch N.P. (ed.), *Conflict and the environment*, Springer, Berlin, 1997, pp. 295-315.
- Vlassopoulos Ch.A., "Institutional Barriers to the Recognition and Assistance of Environmentally Forced Migrants" [in] Afifi T., Jäger J. (eds.), *Environment, Forced Migration and Social Vulnerability*, Springer, Berlin, 2010, pp. 17-29.
- Vogel K.P., "Humans, climate, and plants: the migration of crested wheatgrass and smooth brome grass to the Great Plains of North America" [in] Werner D. (ed.), *Biological resources and Migration*, Springer, Berlin-New York, 2004, pp. 35-45.
- Volger J., "The European Union and the "securitisation" of the environment" [in] Page E.A., Redclift M. (ed.), *Human Security and the Environment*, Edward Elgar, Cheltenham, 2002, pp. 179-198.
- Warner K., Afifi T., De Sherbinin A., Adamo S.B., Ehrhart Ch., "Environmental change and forced migration scenarios: methods and findings from the Nile Delta, Sahel and Mekong Delta" [in] Piguet E., Pécoud P., de Guchteneire P. (eds.), *Migration and Climate Change*, Cambridge University Press, Cambridge, 2011, pp. 188-222.
- Westing A.H., "Environmental Protection from Wartime Damage. The Role of International Law" [in] Gleditsch N.P. (ed.), *Conflict and the environment*, Springer, Berlin, 1997.
- Williams A., "Promoting justice within the international legal system: Prospects for climate refugees" [in] Richardson B.J. (ed.), *Climate law and developing countries. Legal and policy challenges*

- for the world economy*, Edward Elgar Publishing, Cheltenham, 2010, pp. 84-102.
- Wood W.B., "Ecomigration: Linkages Between Environmental Change and Migration" [in] Zolberg A.R., Benda P. (eds.), *Global migrants, global refugees. Problems and solutions*, Berghahn Books, Oxford, 2001.
- Zlotnik H., "Does Population Matter for Climate Change?" [in] Guzman J.M., Martine G., McGranahan G., Schensul D., Tacoli C. (eds.), *Population Dynamics and Climate Change*, UNFPA-IIED, Geneva, 2009, pp. 31-45.

### 4.3 ARTICLES, BOOK REVIEWS

- Adam D., "50 m Environmental Refugees by End of Decade, UN Warns", *The Guardian*, London, 2005.
- Adamo S.B., "Emigración y ambiente: apuntes iniciales sobre un tema complejo", *Papeles de Población*, no. 29, 2001, pp. 143-159.
- Adamo S.B., "Environmental migration and cities in the context of global environmental change", *Current Opinion in Environmental Sustainability*, vol. 2, no. 3, 2010, pp. 161-165.
- Adamo S.B., Izazola H., "Human Migration and the Environment", *Population and Environment*, vol. 32, no. 2-3, 2010, pp. 105-108.
- Adeola F.O., "Cross-national environmental injustice and human rights issues. A review of evidence in the developipng world", *American Behavioral Scientists*, vol. 43, 2000, pp. 686-706.
- Adepoju A., "South-North Migration: The African Experience", *International migration*, vol. 29, no. 2, 1991, pp. 205-221.
- Adepoju A., "Migration in West Africa", *Development*, vol. 46, no. 3, September 2003, pp. 37-41.
- Adger W.N., "Social vulnerability to climate change and extremes in coastal Vietnam", *World Development*, vol. 27, 1999, pp. 249-269.
- Adger W.N., Huq S., Brown K., Hulme M., "Adaptation to Climate Change in the Developing World", *Progress in Development Studies*, vol. 3, no. 3, 2003, pp. 179-195.
- Adger W.N., Benjaminsen T.A., Brown K., Svarstad H., "Advancing a Political Ecology of Global Environmental Discourses", *Development and Change*, vol. 32, no. 4, September 2001, pp. 681-715.
- Adow M., "Pastoralist in Kenya", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 34-35.
- Afifi T., "Economic or Environmental Migration? The Push Factors in Niger", *International Migration*, vol. 49, 2011, pp. 95-124.

- Affi T., "Egyptian Water and Soil: A Cause for Migration and Security Threats?", *NATO Science for Peace and Security Series*, part 2, 2009, pp. 131-143.
- Afolayan A.A., Adelekan I.O., "The role of climatic variations on migration and human health in Africa", *The Environmentalist*, vol. 18, no. 4, 1998, pp. 213-218.
- Ahmed T., "Should there be Environmental Refugees", *ZNet Magazine*, 2004.
- Akokpari J.K., "The State, Refugees and Migration in Sub-Saharan Africa", *International Migration*, vol. 36, no. 2, 1998, pp. 211-234.
- Albuja S., Cavelier Adarve I., "Protecting People Displaced by Disasters in the Context of Climate Change: Challenges from a Mixed Conflict/Disaster Context", *Tulane Environmental Law Journal*, vol. 24, Summer 2011.
- Algan N., Künçek O., "Transboundary Population Movements: Refugees, Environment and Politics", *The Turkish Yearbook of International Relations*, no. 28, 1998, Ankara 2000, pp. 75-103.
- Alscher S., "Environmental Degradation and Migration on Hispaniola Island", *Interntional Migration*, vol. 49, 2011, pp. 164-188.
- Alvarez Gila O., Ugalde Zaratiegui A., López De Maturana Diéguez V., "Western Sahara: Migration, Exile and Environment", *International Migration*, vol. 49, 2011, pp. 146-163.
- Amacher G.S., Hyde W.F., "Migration and the Environment: The Case of Philippine Uplands", *Philippine Journal of Development*, vol. 23, 1996, pp. 425-438.
- Amacher G.S., Cruz W., Grebner D., Hyde W.F., "Environmental Motivations for Migration: Population Pressure, Poverty, and Deforestation in the Philippines", *Land Economics*, vol. 74, 1998, pp. 92-101.
- Aminzadeh S.C., "Moral Imperative: The Human Rights Implications of Climate Change", *Hastings International and Comparative Law Journal*, vol. 30, 2006-2007.
- Andrieux S., "Comment appréhender les migrations climatiques forcées ?", *Regards croisés sur l'économie*, no. 6, 2009.
- Apodaca C., "Human Rights Abuses: Precursor to Refugee Flight?", *Journal of Refugee Studies*, vol. 11, no. 1, 1998, pp. 80-93.
- Ashan R., Karuppannan S., Kellet J., "Climate Migration and Urban Planning System: A Study of Bangladesh", *Environmental Justice*, vol. 4, no. 3, September 2011, pp. 163-170.
- Atapattu S., "Climate Change, Human Rights, and Forced Migration Implications for International Law", *Wisconsin International Law Journal*, vol. 27, no. 3, 2007, pp. 607-636.
- Atapattu S., "Global Climate Change: Can Human Rights (and Human Beings) Survive this Onslaught", *Colorado Journal of International Environmental Law and Policy*, vol. 20, 2008-2009, pp. 35-67.

- Aung T., Singh A., Prasad A., "Sea Level Threat in Tuvalu", *American Journal of Applied Sciences*, vol. 6, no. 6, 2009, pp. 1169-1174.
- Badri S.A., Asgary A., Eftekhari A.R., Levy J., "Post-disaster resettlement, development and change: a case study of the 1990 Manjil earthquake in Iran", *Disasters*, vol. 30, no. 4, 2006, pp. 451-468.
- Bailey A., "Population geographies and climate change", *Progress in Human Geography*, vol. 35, no. 1, 2011.
- Baker R.E., "Determination of Environmental Refugees: Cases for Inclusion and Expansion", *Macalester Environmental Review*, September 2001.
- Baker J., Ehrhart Ch., Stone D., "Hotspots- predictions and action", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 20-22.
- Barbieri A.F., Carr D.L., "Gender-specific out-migration, deforestation and urbanization in the Ecuadorian Amazon", *Global and Planetary Change*, vol. 47, no. 2-4, July 2005, pp. 99-110.
- Barbieri F., Domingues E., Queiroz B.L., Ruiz R.M., Rigotti J.I., Carvahlo J.A.M., Resende M.F., "Climate change and population migration in Brazil's Northeast. Scenarios for 2025–2050", *Population and Environment*, vol. 31, no. 5, 2010, pp. 344-370.
- Bardsley D.K., Hugo G.J., "Migration and climate change: examining thresholds of change to guide effective adaptation decision-making", *Population and Environment*, vol. 32, no. 2-3, 2010, pp. 238-262.
- Barnett J., "Adapting to climate change in Pacific Island countries: The problem of uncertainty", *World Development*, vol. 29, no. 6, 2001, pp. 977-993.
- Barnett J., "The Geopolitics of Climate Change", *Geography Compass*, vol. 1, no. 6, pp. 1361-1375, 2007.
- Barnett J., "Security and Climate Change", *Global Environmental Change*, vol. 13, 2003, pp. 7–17.
- Barnett J., Adger N.W., "Climate Dangers and Atoll Countries", *Climatic Change*, vol. 61, no. 3, 2003, pp. 321-337.
- Barrios S., Bertinelli L., Strobl E., "Climatic change and rural–urban migration: The case of sub-Saharan Africa", *Journal of Urban Economics*, vol. 60, no. 3, November 2006, pp. 357-371.
- Basher R., "Disasters and what to do about them", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 35-37.
- Bates D.C., "Environmental Refugees? Classifying Human Migrations Caused by Environmental Change", *Population & Environment*, vol. 23, no. 5, 2002, pp. 465-477.
- Bates F.L., Belcher J.C., "Aftermath of natural disasters: coping through residential mobility", *Disasters*, vol. 7, no. 2, 1983, pp. 118-128.
- Bedford R.D., Es H., Krishnan V., Hong B., "The neighbourhood effect: The Pacific in Aotearoa and

- Australia", *Asian and Pacific Migration Journal*, vol. 16, no. 2, 2007, pp. 251–269.
- Belcher J.C., Bates F.L., "Aftermath of natural disasters: coping through residential mobility", *Demography*, vol. 7, no. 2, 1983, pp. 118-128.
- Belcher J.C., Bates F.L., "Aftermath of natural disasters: Coping through residential mobility", *Disasters*, vol. 7, no. 2, june 1983, pp. 118-128.
- Bell D.R., "Environmental Refugees: What Rights? Which Duties?", *Res Publica*, vol. 10, no. 2, pp. 135-152.
- Beniston M., "Issues Relating to Environmental Change and Population Migrations. A Climatologist's Perspective", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 1-24.
- Bertrand V., "Governing for the Environment: Global Problems, Ethics and Democracy", *Ethics & International Affairs*, vol. 16, 2002, pp.
- Besthorn F.H., Meyer E.E., "Environmentally Displaced Persons: Broadening Social Work's Helping Imperative", *Critical Social Work*, vol. 11, no. 3, 2010.
- Betaille J., Gemenne F., "Des 'réfugiés écologiques' à la protection des 'déplacés environnementaux': Éléments du débat juridique en France", *Hommes & migrations*, no. 1284, 2010, pp. 144-155.
- Betts A., "Towards a 'Soft Law' Framework for the Protection of Vulnerable Irregular Migrants", *International Journal of Refugee Law*, vol. 22, no. 2, 2010, pp. 209-236.
- Betts T.F., "Rural Refugees in Africa", *International Migration Review*, vol. 15, no. 1-2, (Refugees Today), Spring-Summer, 1981, pp. 213-218.
- Bhattacharya H., Innes R., "An Empirical Exploration of the Population-Environment Nexus in India", *American Journal of Agricultural Economics*, vol. 90, no. 4, November 2008, pp. 883-901.
- Biermann F. Boas I., "Preparing for a Warmer World: Towards a Global Governance System to Protect Climate Refugees", *Global Environmental Politics*, vol. 10, no. 1, 2010, pp. 60-88.
- Biermann F., Boas I., "Protecting Climate Refugees: The Case for a Global Protocol", *Environment*, vol. 50, no. 6, 2008, pp. 8–16.
- Biermann F., Van Asselt H., Boas I., Massey E., Pattberg P., Edenhofer O., Flachsland Ch., Neufeldt, Biswas A.K., Tortajada-Quiroz H.C., "Environmental impacts of the Rwandan refugees on Zaire", *Ambio*, (Stockholm), vol. 25, no. 6, 1996, pp. 403-408.
- Bilsborrow R., "Population growth, internal migration, and environmental degradation in rural areas of developing countries", *European Journal of Population*, vol. 8, no. 2, 1992, pp. 125-148.
- Bilsborrow R., "Land Use, Migration, and Natural Resource Deterioration: The Experience of Guatemala and the Sudan", *Population and Development Review*, vol. 16, 1990, pp. 125-147.
- Binns J.A., Mortimore M., "Rwandan refugees and the environment in Zaire", *Ecodecision*, vol. 2,

- 1989, pp. 73-75.
- Black R., "Fifty Years of Refugee Studies: From Theory to Policy", *International Migration Review*, vol. 35, no. 1, 2001, pp. 57-78.
- Black R., "Forced Migration and Environmental Change: the Impact of Refugees on Host Environments", *Journal of Environmental Management*, vol. 42, no. 3, 1994, pp. 261-277.
- Black R., "Environmental change in refugee-affected areas of the Third World: The role of policy and research", *Disasters*, vol. 18, no. 2, 1994, pp. 107-116.
- Black R., "L'impact des réfugiés sur l'environnement écologique des pays d'accueil (Afrique subsaharienne)", *Autrepart*, vol. 7, 1998, pp. 23-42.
- Black R., Sessay M.F., "Forced migration, environmental change, and woodfuel issues in the Senegal River Valley", *Environmental Conservation*, vol. 24, 1997, pp. 251-260.
- Black R., Sessay M., "Refugees and environmental change in West Africa: The role of institutions", *Journal of International Development*, vol. 10, 1998, pp. 699-713.
- Black R., Adger N.W., Arnell N.W., Dercon S., Geddes A., Thomas D., "The effects of environmental change on human migration", *Global Environmental Change*, vol. 21, supplement 1, 2011.
- Black R., Kniveton D., Schmidt-Verkerk K., "Migration and climate change: towards an integrated assessment of sensitivity", *Environment and Planning A*, vol. 43, no. 2, 2011, pp. 431-450.
- Blanco C., "The Determinants of Interstate Population Movements", *Journal of Regional Science*, vol. 5, no. 1, 1963, pp. 77-84.
- Blitz B.K., "Statelessness and Environmental-Induced Displacement: Future Scenarios of Deterritorialisation, Rescue and Recovery Examined", *Mobilities*, vol. 6, no. 3, 2011, pp. 433-450.
- Bodansky D., "The United Nations Framework Convention on Climate Change: A commentary", *Yale Journal of International Law*, vol. 18, 1993, pp. 453-558.
- Boehmer-Christiansen S., "Global climate protection policy: the limits of scientific advice", *Global Environmental Change*, vol. 4, no. 2, June 1994, pp. 140-159.
- Bogardi J., "Hazards, risks and vulnerabilities in a changing environment: The unexpected onslaught on human security?", *Global Environmental Change*, vol. 14, 2004, pp. 361-365.
- Bogardi J., Warner K., "Here comes the flood", *Nature Reports Climate Change*, published online 11 December 2008.
- Boon E.K., Le Tra T., "Are Environmental Refugees Refused", *Stud. Tribes Tribals*, vol. 5, no. 2, 2007, pp. 85-95.
- Branco do Nascimento A.P., Correa Alves M., Guerra Molina S.M., "Refugiados Ambientais: Uma nova categoria de pessoas na ordem jurídica internacional", *Revista Internacional de Direito e*

- Cidadania*, no. 7, 2010.
- Breidenich C., Magraw D., Rowley A., Rubin J.W., "The Kyoto Protocol to the United Nations Framework Convention on Climate Change", *The American Journal of International Law*, vol. 92, no. 2, April 1998, pp. 315-331.
- Brindal E., "Asia Pacific: Justice for 'Climate Refugees' (2007)", *Alternative Law Journal*, vol. 32, 2007.
- Bronen R., "Alaskan communities' rights and resilience", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 30-32.
- Brown O., "The numbers game", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 8-10.
- Brown O., Hammill A., McLeman R., "Climate change as the new security threat: implications for Africa", *International Affairs*, vol. 83, no. 6, 2007, pp. 1141-1154.
- Brown O., McLeman R., "A recurring anarchy? The emergence of climate change as a threat to international peace and security", *Conflict, Security & Development*, vol. 9, no. 3, October 2009.
- Brooks R.H., "Human Response to Recurrent Drought in Northeastern Brazil", *The Professional Geographer*, vol. 23, 1971, pp. 40-44.
- Brooks Masters S., "Environmentally-Induced Migration: Beyond A Culture of Reaction", *Georgetown Immigration Law Journal*, vol. 14, Summer 2000.
- Brown L.R., "Environmental Watch: Troubling New Flows of Environmental Refugees", *The Humanist*, vol 64, no. 2, 2004, pp. 34.
- Brunk K., Gronenbom D., "Floods, droughts, and migrations: The effects of Late Holocene lake level oscillations and climate fluctuations on the settlement and political history in the Chad basin", *Studien zur Kulturkunde*, vol. 121, 2004, pp. 101-132.
- Bugajski D.R., "Klimatyczna deterytorializacja państwa na przykładzie Tuvalu", *Stosunki Międzynarodowe-International Relations*, vol. 41, no. 1-2, 2010.
- Burkett M., "In Search of Refuge: Pacific Islands, Climate-Induced Migration, and the Legal Frontier", *Asia Pacific Issues*, no. 98, January 2011.
- Burkett M., "The Nation Ex-Situ: On climate change, deterritorialized nationhood and the post-climate era", *Climate Law*, vol. 2, no. 3, 2011, pp. 345-374.
- Burleson E., "Climate Change Displacement to Refuge", *Journal of Environmental Law and Litigation*, vol. 25, no. 1, 2010, pp. 20-34.
- Busch P-O., Jörgens H., "International patterns of environmental policy change and convergence", *European Environment*, vol. 15, no. 2, April 2005, pp. 80-101.
- Byravan S., Rajan S.Ch., "Providing New Homes for Climate Change Exiles", *Climate Policy*, vol. 6,



2006, pp. 247-252.

Byravan S., Rajan S.Ch., "Warming Up to Immigrants: An Option for the US in Climate Policy", *Economic and Political Weekly*, vol. 44, no. 45, november 2009, pp. 19-23.

Byravan S., Rajan S.Ch., "Immigration could ease climate-change impact", *Nature*, vol. 434, march 2005.

Byravan S., Rajan S.Ch., "The Social Impacts of Climate Change in South Asia", *Journal of Migration and Refugee Issues*, vol. 5, no. 3, 2009, pp. 134-147.

Byravan S., Rajan S.Ch., "The Ethical Implications of Sea-Level Rise Due to Climate Change", *Ethics & International Affairs*, vol. 24, no. 3, 2010, pp. 239-260.

Cairns Jr. J., "Environmental Refugees", *The Social Contract*, Fall 2002, pp. 34-44.

Cambrézy L., "Réfugiés climatiques, migrants environnementaux ou déplacés ?", *Revue Tiers Monde*, no. 204, 2010.

Cameron T.A., McConnaha I.T., "Evidence of Environmental Migration", *Land Economics*, vol. 82, no. 2, 2006, pp. 273-290.

Cameron-Glickenhau J., "Palau-coral reef protection", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 52-54.

Campbell J., "Disasters and development in historical context: Tropical cyclone response in the Banks Islands, northern Vanuatu", *International Journal of Mass Emergencies and Disasters*, vol. 8, 1990, pp. 401-424.

Cano Ramirez M., De la Tejera Hernández B., Lucila de Lourdes Salazar Barri, "Las Diferentes Caras de la Relación Migración-Ambiente", *CIMEXUS: Revista de Investigaciones Mexico-Estados Unidos*, vol. 4, no. 1, 2009.

Carballo M., "Climate change, migration and health", *World hospitals and health services. The official journal of the International Hospital Federation*, vol. 44, no. 2, 2008, pp. 47-8.

Carballo M., Smith Ch.B., Pettersson K., "Health challenges", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 32-34.

Cardy F., "Desertification - A fresh approach", *Desertification Control Bulletin*, vol. 22, 1993, pp. 4-8.

Carlsson A., "The Environment and the Security Initiative: Transforming Risks into Opportunities for Co-Operation", *NATO Security through Science Series*, vol. 3, 2006, (Desertification in the Mediterranean Region. A Security Issue), pp. 373-383.

Caron D.D., "When Law Makes Climate Change Worse: Rethinking the Law of Baselines in Light of a Rising Sea Level", *Ecology Law Quarterly*, vol. 17, 1990, pp. 621-653.

Carr D.L., "Proximate Population Factors and Deforestation in Tropical Agricultural Frontiers", *Population and Environment*, vol. 25, no. 6, 2004, pp. 586-612.

- Carr D.L., "Population and deforestation: why rural migration matters", *Progress in Human Geography*, vol. 33, no. 3, 2009, pp. 355-378.
- Carr D.L., "Migration to the Maya Biosphere Reserve, Guatemala: Why Place Matters", *Human Organization*, vol. 67, no. 1, 2008, pp. 37-48.
- Carr D.L., Suter L., Barbieri A., "Population Dynamics and Tropical Deforestation: State of the Debate and Conceptual Challenges", *Population and Environment*, vol. 27, no. 1, 2005, pp. 89-113.
- Carr E.R., "Placing the environment in migration: environment, economy, and power in Ghana's Central Region", *Environment and Planning A*, vol. 37, no. 5, 2005, pp. 925-946.
- Cassels S., Curran S.R., Kramer R., "Do Migrants Degrade Coastal Environments? Migration, Natural Resource Extraction and Poverty in North Sulawesi, Indonesia", *Human Ecology*, vol. 33, no. 3, 2005, pp. 329-363.
- Castañeda I.S., Mulitza S., Schefuss E., dos Santos, R.A.L., Damsté, J.S.S., Scheuten S., "Wet phases in the Sahara/Sahel region and human migration patterns in North Africa", *Proceedings of the National Academy of Sciences of the United States of America*, vol. 106 no. 48, (1 December 2009), pp. 20159-20163.
- Castles S., "Towards a Sociology of Forced Migration and Social Transformation", *Sociology*, February 2003, vol. 37, no. 1, pp. 13-34.
- Castles S., "The International Politics of Forced Migration", *Development*, vol. 46, no. 3, 2003, pp. 11-20.
- Cernea M., "The risk and reconstruction model for resettling displaced populations", *World Development*, vol. 25, no. 10, 1997, pp.1569-1588.
- Chambers A.F., Chamber K.S., "Five Takes on Climate and Cultural Change in Tuvalu", *The Contemporary Pacific*, vol. 19, no. 1, Spring 2007, pp. 294-306.
- Charney J.G., "Dynamics of deserts and drought in the Sahel," *Quarterly Journal of the Royal Meteorological Society*, vol. 101, 1975, pp. 193-202.
- Charnley S., "Environmentally-Displaced Peoples and the Cascade Effect: Lessons from Tanzania", *Human Ecology*, vol. 25, no. 4, 1997, pp. 593-618.
- Chaturvedi S., Doyle T., "Geopolitics of fear and the emergence of 'climate refugees': imaginative geographies of climate change and displacements in Bangladesh", *Journal of Indian Ocean Region*, vol. 6, no. 2, 2010, pp. 206-222.
- Chemillier-Gendreau M., "Faut-il un statut international de Réfugié Ecologique?", *Revue Européenne de droit de l'environnement*, no. 4, 2006, pp. 446-453.
- Chen M., Xu Ch., Wang R., "Key natural impacting factors of China's human population distribution", *Population and Environment*, vol. 28, no. 3, 2007, pp. 187-200.

- Chinedu U.O., "Internal displacement in Nigeria", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 37-38.
- Christensen A.E., Mertz O., "Researching Pacific island livelihoods: Mobility, natural resource management and nissology", *Asia Pacific Viewpoint*, vol. 51, no. 3, 2010, pp. 278-287.
- Chung H., "Environmentally-Induced Displacement: Identifying the Complexities and Finding Solutions Under the Current International Protection Regime", *Journal of Internal Displacement*, January 2011.
- Clark W.A.V., "Social and political contexts of conflict", *Forced Migration Review*, vol. 31, 2008, pp. 22-23.
- Clarke J.I., "Education, population, environment and sustainable development", *International Review of Education*, vol. 39, no. 1-2, 1993, pp. 53-61.
- Cleveland D.A., "Migration in West Africa: A Savanna Village Perspective", *Africa: Journal of the International African Institute*, vol. 61 no. 2, 1991, pp. 222-246.
- Codjoe S.N., "Floods in the Sahel: an analysis of anomalies, memory, and anticipatory learning", *Climatic Change*, vol. 103, no. 3-4, 2010, pp. 471-502.
- Cohen R., Bradley M., "Disasters and Displacement: Gaps in Protection", *Journal of International Humanitarian Legal Studies*, vol. 1, no. 1, 2010, pp. 95-142.
- Connell J., Conway D., "Migration and remittances in island microstates: A comparative perspective on the South Pacific and the Caribbean", *International Journal of Urban and Regional Research*, vol. 24, no. 1, March 2000, pp. 52-78.
- Connell J., "Losing ground? Tuvalu, the greenhouse effect and the garbage can", *Asia Pacific Viewpoint*, vol. 44, no. 2, August 2003, pp. 89-107.
- Connell J., "Population, Migration, and Problems of Atoll Development in the South Pacific", *Pacific Studies*, no. 9, 1987, pp. 41-58.
- Cooper J.B., "Environmental Refugees: Meeting the Requirements of the Refugee Definition", *New York University Environmental Law Journal*, vol. 6, 1998 pp. 471-487.
- Coppolillo P.B., "The Landscape Ecology of Pastoral Herding: Spatial Analysis of Land Use and Livestock Production in East Africa", *Human Ecology*, vol. 28, no. 4, 2000, pp. 527-560.
- Cournil Ch., "A la recherche d'une protection pour les 'réfugiés environnementaux' actions, obstacles, enjeux et propositions", *Revue Asylon(s)*, no. 6, 2008.
- Cournil Ch., Depigny Y., "Contractualisation et externalisation de la politique migratoire: analyse et critique de la loi Hortefeux", *Revue du Droit Public*, no. 4, 2008, pp. 1045-1079.

- Cournil Ch., "Des protections juridiques pour les réfugiés environnementaux en débats: enjeux et limites", *Colloque international sur les migrations et les écosystèmes environnementaux. Les réfugiés de l'environnement*, Rabat 2010.
- Cournil Ch., "Les aspects juridiques et les questions de la protection des réfugiés écologiques", *Acte de la conférence De la crise écologique à la crise Humanitaire et environnement*, Grenoble, février 2008, pp. 20-30.
- Cournil Ch., "Les réfugiés environnementaux. Des déplacés en quête de protection", *Regards sur le droit des étrangers, Actes du Colloque de l'ADOC du 24 octobre 2009*, Presses de l'Université Toulouse, Toulouse, 2009, pp. 151-167.
- Cournil Ch., "Les 'réfugiés environnementaux': enjeux et questionnements autour d'une catégorie émergente", [in] *Dossier spécial* (Fixer les mobilités: Usages et paradoxes des catégorisations en migration), *Revue Migrations et Société*, no. 128, mars-avril 2010, pp. 67-79.
- Cournil Ch., Mazzega P., "Catastrophes écologiques et flux migratoires: Comment protéger les 'réfugiés écologiques'?", *Revue européenne du droit de l'environnement*, no. 4, 2006, pp. 417-427.
- Cournil Ch., Mazzega P., "Comment protéger les 'réfugiés écologiques'?", *Revue Européenne des Migrations Internationales*, vol. 23, no. 1, 2007, pp. 7-34.
- Cournil Ch., Mazzega P., "Réflexions prospectives sur une protection juridique des réfugiés écologiques", *Revue européenne des migrations internationales*, vol. 23, no. 1, 2007, pp. 7-34. (ref. ecol.).
- Cournil Ch., "Quelle protection juridique pour les réfugiés climatiques", *Actes de la conférence du 11 juin 2008 au Parlement européen sur les Migrations climatiques*, Publication des Verts, Alliance Libre Européenne, 2008, pp. 15-16.
- Cournil Ch., "Vers une reconnaissance du «réfugié écologique»? Quelle(s) protection(s), Quel(s) statut(s)?", *Revue du Droit Public*, no. 4, 2006, pp. 1035-1066.
- Crock M., "In the Wake of the Tampa: Conflicting Visions of International Refugee Law in the Management of Refugee Flows", *Pacific Rim Law & Policy Journal*, vol. 12, 2003.
- Cronin A.A., Shrestha D., Spiegel P., "Water – new challenges", Koser K., "Gaps in IDP protection", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 26-18.
- Curran S., "Migration, Social Capital, and the Environment: Considering Migrant Selectivity and Networks in Relation to Coastal Ecosystems", *Population and Development Review*, vol. 28, 2002, pp. 89-125.
- Curran S., Agardy T., "Considering Migration and Its Effects on Coastal Ecosystems", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research,

- vol. 20), 2004, pp. 201-229.
- Curran S.R., Agardy T., "Common Property Systems, Migration, and Coastal Ecosystems", *AMBIO: A Journal of the Human Environment*, vol. 31, no. 4, 2002, pp.303-305.
- Cutler P., "The response to drought of Beja famine refugees in Sudan", *Disasters*, vol. 10, no. 3, 1986, pp. 181-188.
- Cutter S., "Vulnerability to environmental hazards", *Progress in Human Geography*, vol. 20, no. 4, 1996, pp. 529-539.
- da Cunha A.P., "O Direito Internacional dos Refugiados em xeque: refugiados ambientais e econômicos", *Revista Brasileira de Direito Internacional*, vol. 8, no. 8 (4), 2010.
- Dalby S. (2002), "Environmental Change and Human Security, in Isuma", *Canadian Journal of Policy Research*, vol. 3, no. 2, 2002, pp. 71–79.
- Daley W.R., Karpati A., Sheik M., "Needs Assessment of the Displaced Population Following the August 1999 Earthquake in Turkey", *Disasters*, vol. 25, no. 1, March 2001, pp. 67-75.
- Danish K.W., "International Environmental Law and the "Bottom-up" Approach: A Review of the Desertification Convention", *Indiana Journal of Global Legal Studies*, vol. 3, no. 1, 1995, pp. 133-176.
- Darkoh M.B.K., "The nature, causes and consequences of desertification in the drylands of Africa", *Land Degradation and Development*, vol. 9., no. 1, January/February 1998, pp. 1-20.
- Davis J., Lopez-Carr D., "The effects of migrant remittances on population–environment dynamics in migrant origin areas: international migration, fertility, and consumption in highland Guatemala", *Population and Environment*, vol. 32, no. 3-3, 2010, pp. 216-237.
- Day A., "Changing images of environment and well-being: Perceptions of the environment as an intermediate variable in demographic behavior", *Geographia Polonica*, vol. 64, 1995, pp.269-81.
- De Kalbermatten G., "Desertification and natural resources, environment, and food security", *Agriculture and Rural Development*, vol. 1, 2007, pp. 4-35.
- De Sherbinin A., Castro M., Gemenne F., Cernea M.M., Adamo S., Fearnside P.M., Krieger G., Lahmani S., Oliver-Smith A., Pankhurst A., Scudder T., Singer B., Tan Y., Wannier G., Boncour P., Ehrhart C., Hugo G., Pandey B., Shi G., "Preparing for Resettlement Associated with Climate Change", *Science*, vol. 334, no. 6055, October 2011, pp. 456-457.
- De Sherbinin A., VanWey L.K., McSweeney K., Aggarwal R., Barbieri A., Henry S., Hunter L.M., Twine W., Walker R., "Rural household demographics, livelihoods and the environment", *Global Environmental Change*, vol. 18, no. 1, February 2008, pp. 38-53.
- De Witte C., "At the Water's Edge: Legal Protections and Funding for a New Generation of Climate

- Change Refugees", *Ocean and Coastal Law Journal*, 2011.
- Decrop G., "Un statut de réfugié environnemental est-il une réponse pertinente aux effets sociaux du réchauffement climatique?", *REVUE Asylon(s)*, no. 6, novembre 2008.
- Deng F.M., "The Global Challenge of Internal Displacement", *Washington University Journal of International Law & Politics*, 2001.
- Detraz N., Betsill M.M., "Climate Change and Environmental Security: For Whom the Discourse Shifts", *International Studies Perspectives*, vol. 10, 2009, pp. 303–320.
- Devereux S., Edwards J., "Climate Change and Food Security", *IDS Bulletin*, vol. 35, no. 3, 2004, pp. 22-30.
- Devlin H., "Nations Will Vanish and Millions Lose Their Homes to Rising Seas", *The Times*, 1 December 2009.
- Dietz T., "Migration to and from dry areas in Kenya", *Tijdschrift voor economische en sociale geografie*, vol. 77, no. 1, 1986, pp. 18-26.
- Djiga H.A., "La gouvernance locale à l'épreuve des migrations dues aux changements climatiques: cas des rapports entre conseils villageois de développement et chefs traditionnels au Burkina Faso dans la gestion des conflits sociaux", *Vertigo. La revue électronique en sciences de l'environnement*, no. 6, 2010.
- Docherty B., Giannini T., "Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees", *Harvard Environmental Law Review*, vol. 33, no. 2, 2009, pp. 349-405.
- Doevenspeck M., "The Thin Line Between Choice and Flight: Environment and Migration in Rural Benin", *International Migration*, vol. 49, pp. 50-68.
- Donner W., Rodríguez H., "Population Composition, Migration and Inequality: The Influence of Demographic Changes on Disaster Risk and Vulnerability", *Social Forces*, vol. 87, no. 2, December 2008, pp. 1089-1114.
- Döös B.R., "Can large-scale environmental migration be predicted?", *Global Environmental Change*, vol. 7, no. 1, 1997, pp. 41-61.
- Döös B. R., "Predicting environmental migration", *Tiempo*, no. 24, June 1997, pp 1-10.
- Döös B.R., "Environmental degradation, global food production and risk for large-scale migrations", *Ambio*, vol. 23, no. 2, 1994, pp 124-130.
- Downing T.E., Ringius L., Hulme M., Waughray D., "Adapting to climate change in Africa: prospects and guidelines", *Mitigation and Adaptation Strategies for Global Change*, vol. 2, 1997, pp. 19-44.
- Dumont G-F., "Prospective des migrations climatiques", *Population & Avenir*, no. 682, mars-avril 2007.

- Dun O., "Migration and Displacement Triggered by Floods in the Mekong Delta", *International Migration*, vol. 49, 2011, pp. 200-223.
- Dun O., Gemenne F., "Defining 'environmental migration'", *Forced Migration Review*, vol. 31, 2008, pp. 10-11.
- Duong T.T.V., "When Islands Drown: The Plight of 'Climate Change Refugees' and Recourse to International Human Rights Law", *University of Pennsylvania Journal of International Law*, vol. 31, no. 4, summer 2010.
- "Eco-refugees warning", *New Scientist*, 10 June 1989.
- Edwards G.E., "International Human Rights Law Violations before, during, and after Hurricane Katrina: An International Law Framework for Analysis", *Thurgood Marshall Law Review*, Spring 2006.
- Edwards S., "Social breakdown in Darfur", *Forced Migration Review*, vol. 31, October 2008, pp. 23–24.
- Ehrhart Ch., "Casualties of Climate Change", *Scientific American Magazine*, 2011.
- Elliot L., "Imaginative adaptations: A possible environmental role for the UN Security Council", *Contemporary Security Policy*, vol. 24, no. 2, April 2003, pp. 47-68.
- Eschenbach W., "Tuvalu not Experiencing Increased Sea Level Rise", *Energy & Environment*, vol. 15, no. 3, 2004, pp. 527-544.
- Ezra M., Gebre-Egziabher K., "Rural Out-Migration in the Drought Prone Areas of Ethiopia: A Multilevel Analysis", *International Migration Review*, vol. 35, no. 3, 2001, pp. 749-771.
- Ezra M., "Demographic responses to environmental stress in the drought- and famine-prone areas of northern Ethiopia", *International Journal of Population Geography*, vol. 7, 2001, pp. 259-279.
- Falk W.W., Hunt M.O, Hunt, L. L., "Hurricane Katrina and New Orleanians' Sense of Place – Return and Reconstitution or "Gone with the Wind"?", *Du Bois Review*, vol. 3, no. 1, 2006, pp. 115-128.
- Farbotko C., "Wishful sinking: Disappearing islands, climate refugees and cosmopolitan experimentation", *Asia Pacific Viewpoint*, no. 51, vol. 1, 2010, pp. 47-60.
- Farbotko C., "Tuvalu and Climate Change: Constructions of Environmental Displacement in the 'Sydney Morning Herald'", *Geografiska Annaler. Series B, Human Geography*, vol. 87, no. 4, (Special Issue: Islands: Objects of Representation), 2005, pp. 279-293.
- Farbotko C., "'The global warming clock is ticking so see these places while you can': Voyeuristic tourism and model environmental citizens on Tuvalu's disappearing islands", *Singapore Journal of Tropical Geography*, vol. 31, no. 2, July 2010, pp. 224-238.
- Farbotko C., McGregor H., "Copenhagen, Climate Science and the Emotional Geographies of Climate Change", *Australian Geographer*, vol. 41, no. 2, 2010, pp. 159-166.

- Felli R., "Justice globale pour les réfugié-e-s climatiques?", *REVUE Asylon(s)*, no. 6, novembre 2008.
- Feng S., Krueger A.B., Oppenheimer M., "Linkages among climate change, crop yields and Mexico-US cross-border migration", *Proceedings of the National Academy of Sciences*, vol. 107, no. 32, pp. 14257-14262.
- Fankhauser S., "Protection versus retreat: the economic costs of sea-level rise", *Environment and Planning A*, vol. 27, no. 2, 1995, pp. 299–319.
- Fielding A.J., "The impacts of environmental change on UK internal migration", *Global Environmental Change*, 2011.
- Findlay A.M., "Migrant Destinations in an era of environmental change", *Global Environmental Change*, vol. 21, Supplement 1, 2011, pp. 50-58.
- Findley S.E., "Does Drought Increase Migration? A Study of Migration from Rural Mali during the 1983-1985 Drought", *International Migration Review*, vol. 28, no. 3, 1994, pp. 539-553.
- Fonseca F.E., "A convergência entra a proteção ambiental e a proteção da pessoa humana no âmbito do direito internacional", *Revista Brasileira de Política Internacional*, vol. 50, no. 1, 2007, pp. 121-138.
- Foster Perez R.M., Goldstein M.F., "Chernobyl Disaster Sequelae in Recent Immigrants to the United States from the former Soviet Union (FSU)", *Journal of Immigrant and Minority Health*, vol. 9, no. 2, 2006, pp. 115-124.
- Forji A.G., "Climate change, human rights and land displacement: three sides of the same coin", *IOP Conference Series: Earth and Environmental Science*, vol. 6, session 56, 2009.
- Füssel H.M., "Vulnerability: A Generally Applicable Conceptual Framework for Climate Change Research", *Global Environment Change*, vol. 17, pp. 155-167.
- Füssel H.M., Klein R.J., "Climate change vulnerability assessments: an evolution of conceptual thinking", *Climatic Change*, vol. 75, no. 2, 2006, pp. 301–329.
- Fussell E., Sastry N., Van Landingham M., "Race, socioeconomic status, and return migration to New Orleans after Hurricane Katrina", *Population and Environment*, vol. 31, no. 1-3, 2010, pp. 20-42.
- Fussell E., "Post-Katrina New Orleans as a New Migrant Destination", *Organization & Environment*, vol. 22, no. 4, December 2009, pp. 458-469.
- Gaan N., "Environmental Scarcity, Migration and Future Sea Level Rise in Bangladesh: Security Implications on India", *Asian Profile*, vol. 33, no. 6, 2005, pp. 617.
- Gachuruzi S.B., "The Impact of Refugees on the Environment: The Case of Rwandan Refugees in Kivu, Zaire", *Refuge*, vol. 15, no. 2, April 1996, pp. 24-26.
- Gallardo L., "Migraciones y deuda ecológica. Reflexiones para el caso ecuatoriano", *Revista*



*Académica de Relaciones Internacionales*, no. 5, Noviembre de 2006.

Geisler Ch., De Sousa R., "From refuge to refugee: the African case", *Public Administration and Development*, vol. 21, no. 2, may 2001, pp. 159-170.

o

Gemenne F., "Climate-induced population displacements in a 4 C+ world", *Philosophical Transactions A*, vol. 369, no. 1934, 2011, pp. 182-195.

Gemenne F., "Migrations et environnement, état des savoirs sur une relation méconnue" [in] GISTI (ed.), *Quel statut pour les réfugiés environnementaux? Actes de la journée du 14 décembre 2007*, GISTI, Paris, 2007.

Gemenne F., "Migration et environnement: brève introduction à une relation méconnue et souvent négligée", *Etopia, revue d'écologie politique*, no. 3, 2007, pp. 213-226.

Gemenne F., "Tuvalu, un laboratoire du changement climatique? Une critique empirique de la rhétorique des «canaris dans la mine»", *Revue Tiers Monde*, vol. 4, no. 204, 2010.

Gemenne F., "Migrations et environnement : prévisions, enjeux, gouvernance", *Regards croisés sur l'économie*, no. 8, 2010.

Gemenne F., "Les populations insulaires face au changement climatique: des migrations à anticiper", *VertigO*, no. 3, 2011.

Gemenne F., "Le Nord comme le Sud doivent se préparer au changement climatique", *La Recherche*, no. 450, Mars 2003.

Gemenne F., "L'environnement, nouveau facteur de migration?", *L'Enjeu mondial*, part 3, 2009.

Gemenne F., "Panorama des principaux axes de la recherche sur le changement climatique", *Critique internationale*, no. 40, issue 3, 2008.

Gemenne F., "Why the numbers don't add up: A review of estimates and predictions of people displaced by environmental changes", *Global Environmental Change*, 2011.

Gemenne F., Reuchlin P., "Central Asia", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 14-16.

Gemenne F., Cavicchioli, "Migrations et Environment. Prévisions, Enjeux, Gouvernance", *Regards croisés sur l'économie*, no. 8, 2010/2.

Gesest Van der K., Vrieling A., Dietz T., "Migration and environment in Ghana: a cross-district analysis of human mobility and vegetation dynamics", *Environment and Urbanization*, vol. 22, no. 1, 2010, pp. 107-123.

Gilbert G., McLeman R., "Household access to capital and its effects on drought adaptation and migration: A case study of rural Alberta in the 1930s", *Population and Environment*, vol. 32, no. 1, 2010, pp. 3-26.

- Gill N., "'Environmental Refugees': Key Debates and the Contributions of Geographers", *Geography Compass*, vol. 4, no. 7, 2010, pp. 861-871.
- Glazebrook J.S., "Human Rights and the Environment", *Victoria University of Wellington Law Review*, vol. 40, p. 293, 2009.
- Glazouvsy N.F., Shestakov A.S., "Migraciones ambientales causadas por la desertización en Asia Central y Rusia", *Ecología política: cuadernos de debate internacional*, vol. 8, no. 2, 1994, pp. 107-115.
- Gleditsch N.P., "Armed Conflict and The Environment: A Critique of the Literature", *Journal of Peace Research*, vol. 35, no. 3, May 1998, pp. 381-400.
- Gogarty B., "Climat-Change Displacement: Current Legal Solutions to Future Global Problems", *Journal of Law, Information & Science*, vol. 21, no. 1, 2011.
- Gonin P., Lassailly-Jacob V., "Les réfugiés de l'environnement, une nouvelle catégorie de migrants forcés ?", *Revue Européenne des Migrations Internationales*, vol. 18, no. 2, 2003, pp. 139-160.
- Gornitz V., "Global coastal hazards from future sea level rise", *Palaogeography, Palaeoclimatology, Palaeoecology*, vol. 89, no. 4, 1991, pp. 379-398.
- Gottschang T.R., "Economic Change, Disasters, and Migration: The Historical Case of Manchuria", *Economic Development and Cultural Change*, vol. 35, no. 3, 1987, pp. 461-490.
- Goulah J., "Conceptualizing Environmental Refugees in Education: A Transformative Language-Learning Framework", *Diaspora Indigenous and Minority Education*, vol. 4, no. 3, 2010, pp. 192-207.
- Gould Ch.W., "The Right to Housing Recovery After Natural Disasters", *Harvard Human Rights Journal*, vol. 22, 2009, pp. 169-204.
- Gray C.L., "Environment, Land, and Rural Out-migration in the Southern Ecuadorian Andes", *World Development*, vol. 37, no. 2, 2009, pp. 457-468.
- Græger N., "Environmental Security?", *Journal of Peace Research*, vol. 33, no. 1, February 1996, pp. 109-116.
- Graves P.E., "Migration and Climate", *Journal of Regional Science*, vol. 20, no. 2, 1980, pp. 227-237.
- Groen G., Polivka A., "Hurricane Katrina Evacuees: Who They Are, Where They Are, and How They Are Faring", *Monthly Labor Review*, vol. 131, no. 3, 2008, pp. 32-51.
- Grote U., Warner K., "Environmental change and migration in Sub-Saharan Africa", *International Journal of Global Warming*, vol. 2, no. 1, 2010, pp. 17-47.
- Guernsey A.K., "Looking to the Future", *Iowa Law Review*, vol. 2, no. 2, Spring 2008.
- Guttmann M.P., Field V., "Katrina in Historical Context: Environment and Migration in the U.S", *Population and Environment*, vol. 31, no. 1-3, pp. 3-19.

- Hammer T., "Desertification and Migration: A Political Ecology of Environmental Migration in West Africa", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 231-246.
- Hampshire K., "Fulani on the move: Seasonal economic migration in the Sahel as a social process", *Journal of Development Studies*, vol. 38, no. 5, 2002.
- Hampshire K., Randall S., "Seasonal labour migration strategies: coping with poverty or optimising security?", *International Journal of Population Geography*, vol. 5, no. 5, 1999, pp. 367-385.
- Haque C.E., Zaman M.Q., "Coping with Riverbank Erosion Hazard and Displacement in Bangladesh: Survival Strategies and Adjustment", *Disasters*, vol. 13, no. 4, 1989, pp. 300-314.
- Hartmann B., "Rethinking climate refugees and climate conflict: Rhetoric, reality and the politics of policy discourse", *Journal of International Development*, vol. 22, no. 2, 2010, pp. 233-246.
- Hatrick K., "Flight from the environment – a new category of refugees? Disasters expand concept of who is a refugee", *National Catholic Reporter*, vol. 02, February, 2010.
- Haug R., "Forced Migration, Processes of Return and Livelihood Construction among Pastoralists in Northern Sudan", *Disasters*, vol. 26, no. 1, 2002, pp. 70-84.
- Havard B., "Seeking Protection: Recognition of Environmentally Displaced Persons Under International Human Rights Law", *Villanova Environmental Law Journal*, vol. 18, no. 65, 2007.
- Hedman E-L., "Deconstructing Reconstruction in Post-tsunami Aceh: Governmentality, Displacement and Politics", *Oxford Development Studies*, vol. 37, no. 1, 2009, pp. 63-76.
- Heine B., Petersen L., "Adaptation and cooperation", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 48-51.
- Heinonen U., "Environmental Impact on Migration in Cambodia: Water-related Migration from the Tonle Sap Lake Region", *International Journal of Water Resources Development*, vol. 22, no. 3, 2006, pp. 449-462.
- Helmer M., Hilhorst D., "Natural Disasters and Climate Change", *Disasters*, vol. 30, no. 1, pp. 1-4.
- Heming L., Rees P., "Population displacement in the Three Gorges reservoir area of the Yangtze River, central China: relocation policies and migrant views", *International Journal of Population Geography*, vol. 6, no. 6, 2000, pp. 439-462.
- Hens L., "A Human Ecological Approach to Environmental Security and Displacements", *Human Ecology*, (Special Issue: *Human Ecology in the New Millennium*), no. 10, 2001, pp. 203-215.
- Hens L., Boon E.K., "Institutional, Legal, and Economic Instruments in Ghana's Environmental Policy", *Environmental Management*, vol. 24, no. 3, 1999, pp. 337-351.
- Hens L., "Environmentally Displaced People", *Regional Sustainable Development Review: Africa*, 2005.

- Henry S., Boyle P., Lambin E.F., "Modelling Inter-Provincial Migration in Burkina Faso, West Africa: The Role of Socio-Demographic and Environmental Factors", *Applied Demography*, vol. 23, no. 2-3, 2003, pp. 115-136.
- Henry S., Schoumaker B., Beauchernin C., "The Impact of Rainfall on the first Out-Migration: A Multi-Level Event History Analysis in Burkina Faso", *Population and Environment*, vol. 25, no. 5, 2004, pp. 423-460.
- Henry S., Piche V., Ouedraogo D., Lambin E.F., "Descriptive Analysis of the Individual Migratory Pathways According to Environmental Typologies", *Population and Environment*, vol. 25, no. 5, 2004, pp. 397-422.
- Henry S., Schoumaker B., Beauchemin C., "The impact of environmental conditions on migration in Burkina Faso: an event-history analysis", *Population and Environment*, vol. 25, no. 3, pp. 423-460.
- Heyzer N., "Gender, population and environment in the context of deforestation: A Malaysian case study", *IDS Bulletin*, vol. 26, no. 1, 1995, pp. 40-46.
- Hodgkinson D., Burton T., Young L., Anderson H., "Copenhagen, Climate Change 'Refugees' and the Need for a Global Agreement", *Public Policy*, vol. 4, no. 2, 2009, 155-174.
- Hodgkinson D., "A Convention for Persons Displaced by Climate Change", <http://www.skepticalscience.com/news.php?n=704>
- Hogan D.J., Marandola J.R., "Toward an interdisciplinary conceptualization of vulnerability", *Population, Space and Place*, no. 11, 2005, pp. 455-471.
- Homer-Dixon T., "On the threshold: Environmental change as causes of acute conflict", *International Security*, vol. 16, no. 2, 1991, pp. 234-260.
- Homer-Dixon T., "Environmental scarcities and violent conflict: Evidence from cases", *International Security*, vol. 19, no. 1, pp. 5-40.
- Hong J., "Refugees of the 21st Century: Environmental Injustice", *Cornell Journal of Law and Public Policy*, vol. 10, no. 2, 2001, pp. 323-348.
- Hori M., Schafer M.J., Bowman D.J., "Displacement Dynamics in Southern Louisiana After Hurricanes Katrina and Rita", *Population Research and Policy Review*, vol. 28, no. 1, pp. 24-65.
- Hori M., Schafer M.J., "Social costs of displacement in Louisiana after Hurricanes Katrina and Rita", *Population & Environment*, vol. 31, no. 1-3, 2010, pp. 3164-3186.
- Hori M., Schafer M., Bowman D., "The Impact of a Migration Shock on Tenant Satisfaction: The Case of Hurricane Katrina and Baton Rouge, Louisiana", *Population Research and Policy Review*, vol. 28, no. 1, 2009, pp. 45-65.
- Hsu K.J., "Sun, climate, hunger, and mass migration", *Science in China Series D: Earth Sciences*, vol.

- 41, no. 5, 1998, pp. 449-472.
- Hugo G., "Conceptualizing and defining refugee and forced migrations in Asia", *Southeast Asian Journal of Social Science*, vol. 18, no. 1, 1990, pp. 19-42.
- Hugo G., "Environmental Concerns and International Migration", *International Migration Review*, vol. 30, no. 1, 1996, pp. 105-131.
- Hulme M., Biermann F., Boas I., "Climate Refugees: Cause for a New Agreement?", *Environment*, vol. 50, no. 6, 2008, pp. 50-52.
- Hunt C., "Property rights and environmental management on Pacific atolls", *International Journal of Social Economics*, vol. 23, 1996, pp. 221-34.
- Hunter L.M., "Migration and Environmental Hazards", *Population & Environment*, vol. 26, no. 4, 2005, pp. 273-302.
- Hildyard N., "La extracción de combustibles fósiles como generadora de refugiados ambientales", *Ecología política*, no. 33, 2007, pp. 37-50.
- Holmes J., "The need for Colaboration", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008.
- Ielemia A., "A threat to our human rights: Tuvalu's perspective on climate change", *UN Chronicle*, vol. 44, no. 2, 2007.
- Imbernon J., "Image Ikonos et étude environnementale. Le camp de réfugiés du HCR en Guinée forestière", *Bois et forêts des tropiques*, no. 275, 2003, pp. 17-28.
- Islam M., "Natural Calamities and Environmental Refugees in Bangladesh", *Refuge*, vol. 12, no. 1, June 1992, pp. 5-10.
- Itano N., "Europe fears 'climate migrants'", *Christian Science Monitor*, vol. 100, no. 76, 2008, pp. 6.
- Jacobsen K., "Refugees' Environmental Impact: The Effect of Patterns of Settlement", *Journal of Refugee Studies*, vol. 10, no. 1, 1997, pp. 19-36.
- Jacobson J.L., "Environmental Refugees: Nature's Warning System", *Populi*, vol. 16, no. 1, 1989, pp. 29-41.
- Johnson C.A., "Dealing with displacement: Can 'social protection' facilitate long-term adaptation to climate change?", *Global Environmental Change*, vol. 20, no. 4, 2010, pp. 648-655.
- Johnson S., "Climate Change and Global Justice: Crafting Fair Solutions for Nations and Peoples", *Harvard Environmental Law Review*, vol. 33, no. 2, 2009, pp. 297-303.
- Johnson L.S., "Environment, Security and Environmental Refugees", *Journal of Animal & Environmental Law*, 2010.
- Johnston B.R., "Human rights and the environment", *Human Ecology*, vol. 23, no. 2, 1995, pp. 111-123.

- Johnstone C.L., "The future is now", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 47-48.
- Jorgenson A.K., Burns T.J., "Effects of Rural and Urban Population Dynamics and National Development on Deforestation in Less-Developed Countries, 1990–2000", *Sociological Inquiry*, vol. 77, no. 3, 2007, pp. 460-482.
- Julich S., "Drought Triggered Temporary Migration in an East Indian Village", *International Migration*, vol. 49, 2011, pp. 189-199.
- Julienne M., "25 millions de réfugiés écologiques", *Québec Science*, vol. 40, no. 9, juin 2002, pp. 78-79.
- Kalin W., Haenni Dale C., "Disaster risk mitigation – why human rights matter", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 38-40.
- Kalipeni E., "The refugee crisis in Africa and implications for health and disease: a political ecology approach", *Social Science & Medicine*, vol. 46, no. 12, 1998, pp. 1637-1653.
- Karan P.P., "Environmental Movements in India", *The Geographical Review*, vol. 84, 1994, pp. 32-41.
- Kartiki K., "Climate change and migration: a case study from rural Bangladesh ", *Gender and Development*, vol. 19, no. 1, March 2011, pp. 23-38.
- Kassas M., "Desertification: a general review", *Journal of Arid Environments*, vol. 30, no. 2, June 1995, pp. 115-128.
- Keane D., "The environmental causes and consequences of migration: a search for the meaning of 'environmental refugees'", *Georgetown International Environmental Law Review*, vol. 16, 2004, pp. 209-223.
- Kelin W., "Environmental Migration and Sustainable Development", *Chinese Geographical Science*, vol. 8, no. 3, 1998, pp. 271-280.
- Kelman I., "Island evacuation", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 20-22.
- Kerr D., Beaujo R., "Population and the Environment: Canada in Comparative Perspective (Ideas)", *Environments: A journal of interdisciplinary studies*, vol. 35, no. 2, 2007.
- Kesavan P.C., Swaminathan M.S., "Managing extreme natural disasters in coastal areas", *Philosophical Transactions of The Royal Society A*, vol. 364, no. 1845, pp. 2191-2216.
- Kibreab G., "Environmental Causes and Impact of Refugee Movements: A Critique of the Current Debate", *Disasters*, vol. 21, no. 1, 1997, pp. 20-38.
- Kimura S., "Environmentally Displaced Persons", *Jackson School Journal of International Studies*, vol. 1, no. 1, 2010.
- King T., "Environmental Displacement: Coordinating Efforts to Find Solutions", *Georgetown*

- International Environmental Law Review*, vol. 18, 2006, pp. 543-565.
- Kirsch-Wood J., Korreborg J., Linde A-M., "What humanitarians need to do", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 40-42.
- Klaauw van der J., "Refugee Rights in Times of Mixed Migration: Evolving Status and Protection Issues", *Refugee Survey Quarterly*, vol. 28, no. 4, 2010, pp. 59-86.
- Kliot N., "Environmentally Induced Population Movements: Their Complex Sources and Consequences. A Critical Review", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 69-99.
- Knox J.H., "Linking Human Rights and Climate Change at the United Nations", *Harvard Environmental Law Review*, 33, vol. pp. 477-498.
- Kolmannskog V., "Climates of displacement", *Nordic Journal of Human Rights*, vol. 26, no. 4, 2008, pp. 302-320.
- Kolmannskog V., "Climate Change, Human Mobility, and Protection: Initial Evidence from Africa", *Refugee Survey Quarterly*, vol. 29, no. 3, 2010, pp. 103-119.
- Kolmannskog V., "Towards a humanitarian climate change agreement", *Forced Migration Review*, vol. 33, september 2009.
- Kolmannskog V., Myrstad F., "Environmental displacement in European asylum law", *European Journal of Migration and Law*, vol. 11, no. 4, 2009, pp. 313-326.
- Kolmannskog V.O., "No regrets", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 46-47.
- Kolmannskog V., Trebbi L., "Climate change, natural disasters and displacement: a multi-track approach to filling the protection gaps", *International Review of The Red Cross*, vol. 92, no. 879, September 2010.
- Korchut I., "Uchodźstwo Ekologiczne", *Pomagamy. Nowoczesne Pismo Wolontariuszy*, no. 20, 2008.
- Koser K., "Gaps in IDP protection", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 17-18.
- Kozoll Ch.M., "Poisoning the Well: Persecution, the Environment, and Refugee Status", *Colorado Journal of International Environmental Law and Policy*, vol. 15, 2004.
- Kua H.W., Gunawansa A., "A multi-scale analysis of possible conflicts between climate change mitigation and adaptation initiatives in the building industry and human settlement", *Progress in Industrial Ecology, an International Journal*, vol. 7, no. 3, 2010, pp. 219-238.
- Lacroix L., Rousseau C., Gauthier M-F., Singh A., Giguere N., Lemzoudi Y., "Immigrant and refugee preschoolers' sandplay representations of the tsunami", *The Arts in Psychotherapy*, vol. 34, no. 2, 2007, pp. 99-113.

- Lallemant H.R., "L'Apatride Climatique et la disparition d'Etat dans le Pacifique Sud", *Revue juridique polynésienne*, vol. 15, 2009, pp. 77-94.
- Lama M.P., "International Displacement in India: Causes, protection and dilemmas", *Forced Migration Review*, vol. 8.
- Lange H.D., "Climate Refugees Require Relocation Assistance: Guaranteeing Adequate Land Assets Through Treaties Based on the National Adaptation of Programmes of Action", *Pacific Rim Law and Policy Journal*, vol. 19, 2010.
- Lassailly-Jacob V., Gonin P., "Les réfugiés de l'environnement. Une nouvelle catégorie de migrants forcés?", *Revue européenne des migrations internationales*, vol. 18, no. 2, 2002, p. 139-160.
- Landry C.E., Okmyung B., Hindsley P., Whitehead J.C., Wilson K., "Going Home: Evacuation-Migration Decision of Hurricane Katrina Survivors", *Southern Economic Journal*, vol. 74, no. 2, 2007, pp. 326-343.
- Lawton Ch., "What about climate refugees? Efforts to help the displaced bog down in Copenhagen", *Spiegel Online International*.
- Lavergne M., "Le réchauffement climatique à l'origine de la crise du Darfour?", *Revue Tiers-Monde*, no. 204, 2010, pp. 220-250.
- Lavieille J-M., Betaille J., Marguenaud J-P., "Projet de Convention Internationale: Projet de Convention Relative au Statut International Des Déplacés Environnementaux: Rapport Explicatif", *Les Editions Revue de Droit Université de Sherbrooke*, 2008.
- Larivière V., "Laurence Tubiana, François Gemenne, Alexandre Magnan, Anticiper pour s'adapter : Le nouvel enjeu du changement climatique", (book review), *Vertigo La revue électronique en sciences de l'environnement*, vol. 10, no. 3, 2010.
- Lazar C.L., "Land Use: United Nations Treaty to Combat Desertification Enters into Force", *Colorado Journal of International Environmental Law and Policy*, vol. 83, no. 8, 1997, pp. 83-91.
- Lazarus, D., 1990. "New strangers at the door?", *Refugees*, no. 84, 1990, pp. 11-12.
- Leatherman S.P., "Social and economic costs of sea level rise", *International Geophysics*, vol. 75, 2001, pp. 181-223.
- Leckie S., "Human rights implications", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 18-20.
- Lecocq F., "Changement climatique et stratégies de développement", *Regards croisés sur l'économie*, no. 6, 2009/2.
- Lee S-W., "Not a One-Time Event: Environmental Change, Ethnic Rivalry, and Violent Conflict in the Third World", *The Journal of Environment Development*, vol. 6 no. 4, December 1997, pp. 365-396.



- Leimgruber W., "Values, Migration, and Environment: An Essay on Driving Forces behind Human Decisions and their Consequences", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 247-266.
- Leiwen J., Yufen T., Zhijie Z., Tianhong L., Jianhua L., "Water Resources, Land Exploration and Population Dynamics in Arid Areas- The Case of the Tarim River Basin in Xinjiang of China", *Population and Environment*, vol. 26, no. 6, 2005, pp. 471-503.
- Lepage L., "Migration and Environmental Change: From Science to Policy in the Sahel Region. Expert Seminar: Migration and the Environment", *International Dialogue in Migration*, no. 10, IOM, Geneva, 2008.
- Lessa W., "The Social Effects of Typhoon Ophelia in Ulithi", *Micronesia*, vol. 1, 1964, pp. 1-47.
- Levine J.N., Esnard A-M., Sapat A., "Population Displacement and Housing Dilemmas Due to Catastrophic Disasters", *Journal of Planning Literature*, vol. 22, no. 1, August 2007, pp. 3-15.
- Levy M., "Is the environment a national security issue?", *International Security*, vol. 20, no. 2, 1995, pp. 35-62.
- Lewis J., "The Vulnerability of Small Island States to Sea Level Rise: The Need for Holistic Strategies", *Disasters*, vol. 14, no. 3, 1990, pp. 241-249.
- Lewis J., "Sea-Level Rise: Some Implications for Tuvalu", *Ambio*, vol 18, no. 8, 1989, pp. 458-459.
- Limon M., "Human Rights and Climate Change. Constructing a Case for Political Action", *Harvard Environmental Law Review*, vol. 33, no. 1, pp.439-477.
- Livernash R., Rodenburg E., "Population Change, Resources, and the Environment", *Population Bulletin*, vol. 53, no. 1, March 1998.
- Lobry D., "Pour une définition juridique des réfugiés écologiques. Réflexion autour de la qualification juridique de l'atteinte à l'environnement", *Revue Asylon(s)*, no. 6, 2008.
- Locke C., Adger W.N., Kelly P., "Changing places: Migration's social and environmental consequences", *Environment*, vol. 42, no.7, 2000, pp. 24-35.
- Locke J.T., "Climate change-induced migration in the Pacific Region: sudden crisis and long-term developments", *The Geographical Journal*, vol. 175, no. 3, 2009, pp. 171-180.
- Lohrmann R., "Environmentally-Induced Population Displacements And Environmental Impacts From Mass Migrations", *International Migration*, vol. 34, no. 2, April 1996, pp.335-339.
- Lonergan S., "The Role of Environmental Degradation in Population Displacement", *Environmental Change Security Project Reports*, vol. 4, spring 1998, pp. 5-18.
- Lonergan S., "Impoverishment, Population, and Environmental Degradation: The Case for Equity", *Environmental Conservation*, vol. 20, 1993, pp. 328-334.
- Lopez A., "Population Movements, Environmental Change and Social Conflicts in the Brazilian

- Amazon", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 145-163.
- Lopez A., "The Protection of Environmentally-Displaced Persons in International Law", *Environmental Law*, vol. 37, 2007, pp. 365-407.
- Lord J.E., "Legal Restraints in the Use of Landmines: Humanitarian and Environmental Crisis", *California Western International Law Journal*, vol. 25, 1994.
- Loughry M., McAdam J., "Kiribati: Relocation and adaptation", *Forced Migration Review*, vol. 31, 2008, pp. 51-52.
- Lovgren S., "Climate Change Creating Millions of 'Eco Refugees' UN Warns", *National Geographic*, November 18 2005.
- Meyer Lueck M., "Vulnerability, Resilience, and Policy: The Challenge of Environmental Migration and Displacement in the United States", (Research Paper), Colorado State University.
- Luterbacher U., "Migration Patterns, Land Use and Climate Change", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 165-175.
- MacFarquar N., "Refugees join list of climate-change issues", *New York Times*, May 29, 2009.
- Magnigny V., "Des victimes de l'environnement aux réfugiés de l'environnement", *REVUE Asylon(s)*, no. 6, novembre 2008.
- Magadza C.H.D., "Climate Change Impacts and Human Settlements in Africa: Prospects for Adaptation", *Environmental Monitoring and Assessment*, vol. 61, no. 1, 2000, pp. 193-205.
- Magnigny V., "Les réfugiés de l'environnement. Hypothèse juridique à propos d'une menace écologique", *Recueil Alexandries*, no. 6, 1999.
- Mancebo F., "Les déplacés du cyclone Katrina: de l'exode à la migration", *Espaces et sociétés*, no. 139, Avril 2009.
- Marcos C., "Spoiling Movi's River: Towards Recognition of Persecutory Environmental Harm with the Meaning of the Refugee Convention", (International Human Rights Law and the Protection of the Environment, Academy on Human Rights and Humanitarian Law), *American University International Law Review*, vol.24, no. 1, pp. 32-71.
- Marchiori L., Schumacher I., "When nature rebels: international migration, climate change, and inequality", *Journal of Population Economics*, vol. 24, no. 2, 2011, pp. 569-600.
- Marino E., "The long history of environmental migration: Assessing vulnerability construction and obstacles to successful relocation in Shishmaref, Alaska", *Global Environmental Change*, November 2011.
- Marshall L.W., "Toward a new definition of 'refugee': is the 1951 convention out of date?", *European*

- Journal of Trauma and Emergency Surgery*, 2010.
- Martin A., "Environmental Conflict Between Refugee and Host Communities", *Journal of Peace Research*, vol. 42, no. 3, 2005, pp. 329-346.
- Martin S., "Climate Change, Migration, and Governance", *Global Governance*, vol. 16, 2010, pp. 397-414.
- Mas H.F., "Mudanças do clima e populações deslocadas, desafios para uma nova categoria de refugiados", *Revista USCS Direito*, 2010, pp. 168-184.
- Masters S.B., "Environmentally Induced Migration: Beyond a Culture of Reaction", *Georgetown Immigration Law Journal*, vol. 14, 1999, pp. 855-865.
- Masquelier A., "Why Katrina's Victims Aren't Refugees: Musings on a "Dirty" Word", *American Anthropologist*, vol. 108, no. 4, December 2006, pp. 735-743.
- Massey D.S., Axinn W.G., Ghimire D.J., "Environmental change and out-migration: evidence from Nepal", *Population and Environment*, vol. 32, no. 2-3, 2010, pp. 109-136.
- Matz-Luck N., "The Benefits of Positivism: The ILC's Contribution to the Peaceful Sharing of Transboundary Groundwater", *Beiträge zum ausländischen öffentlichen Recht und Völkerrecht*, vol. 211, part 4, 2009, pp. 125-150.
- Mayer B., "The International Legal Challenges of Climate-Induced Migration: Proposal for an International Legal Framework", *Colorado Journal of International Environmental Law and Policy*, vol. 22, no. 3, 2011.
- Mayer J., "Natural Disasters, Climate Change, and the Health of Mobile Populations", *Population Mobility and Infectious Disease*, part. III, 2007, pp. 181-195.
- Mbonile M.J., "Migration and intensification of water conflicts in the Pangani Basin, Tanzania", *Habitat International*, vol. 29, no. 1, March 2005, pp. 41-67.
- McAdam J., "From Economic Refugees to Climate Refugees?", *Melbourne Journal of International Law*, vol. 10, no. 2, 2009, pp. 579-595.
- McAdam J., "Refusing 'Refuge' in the Pacific: (De)Constructing Climate-Induced Displacement in International Law", *University of South Wales Faculty of Law Research Series*, (Paper 27), 2010, pp. 1-28.
- McAdam J., "Swimming against the Tide: Why a Climate Change Displacement Treaty is Not the Answer", *International Journal of Refugee Law*, vol. 23, no. 1, 2011, pp. 2-27.
- McAdam J., "Environmental Migration Governance", *University of New South Wales Faculty of Law Research Series 2009*, Paper 1.
- McAdam J., "Climate Change 'Refugees' and International Law", *Bar News: The Journal of the NSW Bar Association*, Winter 2008, pp. 27-31.

- McCue G.S., "Environmental Refugees: Applying International Environmental Law to Involuntary Migration", *Population and Environment*, vol. 32, no. 2-3, 2010, pp. 109-136.
- McDonald D. "Lest the rhetoric begin: Migration, population and the environment in South Africa", *Geoforum*, vol. 30, 1999, pp. 13-25.
- McGranahan G., "The rising tide: assessing the risks of climate change and human settlements in low elevation coastal zones", *Environment and Urbanization*, vol. 19, no. 1, April 2007, pp. 17-37.
- McGregor J.A., "Climate change and involuntary migration: implications for food security", *Food Policy*, vol. 19, no. 2, 1994, pp. 120-132.
- McGuffin K., "Laura Westra, Environmental Justice and the Rights of Ecological Refugees", (book review), *Human Rights Law Review*, vol. 11, no. 1, 2011, pp. 195-210.
- McLeman R., "Migration Out of 1930s Rural Eastern Oklahoma: Insights for Climate Change Research", *Great Plains Quarterly*, vol. 26, no. 1, 2006, pp. 27-40.
- McLeman R., Smit B., "Migration as an Adaptation to Climate Change", *Climatic Change*, vol. 76, no. 1-2, 2006, pp. 31-51.
- McLeman R., "On the Origins of Environmental Migration", *Fordham Environmental Law Review*, vol. 20, no. 2, 2009.
- Mercer J., "Disaster risk reduction or climate change adaptation: are we reinventing the wheel?", *Journal of International Development*, vol. 22, no. 2, 2010, pp. 247-264.
- Meze-Hausken E., "Migration Caused by Climate Change: How Vulnerable are People in Dryland Areas?", *Mitigation and Adaptation Strategies for Global Change*, vol. 5, no. 4, 2004, pp. 379-406.
- Mileti D., Passerini E., "A social explanation of urban relocation after earthquakes", *International Journal of Mass Emergencies and Disasters*, vol. 14, no. 1, 1996, pp. 97-110.
- Minura N., "Vulnerability of island countries in the South Pacific to sea level rise and climate change", *Climate Research*, vol. 12, August 1999, pp. 137-143.
- Mitchell F.B. et al., "Extreme events due to human-induced climate change", *Philosophical Transactions of the Royal Society*, vol. 364, no. 1845, August 2006, pp. 2117-2133.
- Morrow-Jones H.A., Morrow-Jones C.R., "Mobility due to natural disaster: Theoretical considerations and preliminary analyses", *Disaster*, vol. 15, no. 2, 1991, pp. 126-132.
- Myers C.A., Slack T., Singelmann J., "Social vulnerability and migration in the wake of disaster: the case of Hurricanes Katrina and Rita", *Population and Environment*, vol. 29, no. 6, 2008, pp. 271-291.
- Meyerson F., Merino L., Durand J., "Migration and environment in the context of globalization", *Frontiers in Ecology and Environment*, vol. 5, 2007, pp. 182-190.

- Millar I., "There's No Place Like Home: Human Displacement and Climate Change", *Australian Journal of International Law*, vol. 14, 2007, pp. 71-91.
- Mcgranahan G., Balk D., Anderson B., "The rising tide: assessing the risks of climate change and human settlements in low elevation coastal zones", *Environment and Urbanization*, vol. 19, no. 1, 2007, pp. 17-37.
- McInerney-Lankford S., "Climate Change and Human Rights: An Introduction to Legal Issues", *Harvard Environmental Law Review*, vol. 33, no. 2, 2009, pp. 431-439.
- Mc Leman R., "Impacts of population change on vulnerability and the capacity to adapt to climate change and variability: a typology based on lessons from "a hard country", *Population and Environment*, vol. 31, no. 5, 2010, pp. 286-316.
- McLachlan J.S., Hellmann J.J., Schwartz M.W., "A Framework for Debate of Assisted Migration in an Era of Climate Change", *Conservation Biology*, vol. 21, no. 2, 2007, pp. 297-302.
- McLeman R.A., Smit B., "Migration as an Adaptation to Climate Change", *Climatic Change*, vol. 76, no. 1-2, 2006, pp. 31-53.
- McLeman R.A., Hunter L.M., "Migration in the context of vulnerability and adaptation to climate change: insights from analogues", *Wiley Interdisciplinary Reviews: Climate Change*, vol. 1, no. 3, 2010, pp. 450-461.
- McLeman R., "Migration Out of 1930s Rural Eastern Oklahoma: Insights for Climate Change Research", *Great Plains Quarterly*, 2006.
- McLeman R., Herold S., Reljic Z., Sawada M., McKenney D., "GIS-based modeling of drought and historical population change on the Canadian Prairies", *Journal of Historical Geography*, vol. 36, no. 1, 2010, pp. 43-56.
- McNamara K.E., "Conceptualizing discourses on environmental refugees at the United Nations", *Population and Environment*, vol. 29, no. 1, 2007, pp. 12-24.
- McNamara K.E., Gibson Ch., "'We do not want to leave our land': Pacific ambassadors at the United Nations resist the category of 'climate refugees'", *Geoforum*, vol. 40, no. 3, 2009, pp. 475-483.
- Mercure P.-F., "À la recherche d'un statut juridique pour les migrants environnementaux transfrontaliers: La problématique de la notion de réfugié", *Revue de droit de l'Université de Sherbrooke*, vol. 37, 2006, pp. 1-39.
- Mesa R.S., "Environmental Degradation and Human Rights Abuses: Does the Refugee Convention Confer Protection to Environmental Refugees", *Revista colombiana de derecho internacional*, no. 10, 2007, pp. 75-130.
- Meze-Hausken E., "Migration caused by climate change: how vulnerable are people in dryland areas?", *Migration and Adaptation Strategies for Global Change*, vol. 5, no. 4, 2000, pp. 379-

- Michelot A., "Enjeux de la reconnaissance du statut de réfugié écologique pour la construction d'une nouvelle responsabilité environnementale", *Revue européenne de droit de l'environnement*, no. 4, 2006, pp. 428-445.
- Millikan B.H., "Tropical deforestation, land degradation and society: Lessons from Rondonia, Brazil", *Latin American Perspectives*, vol. 19, 1992, pp. 45-72.
- Mimura N., "Vulnerability of island countries in the South Pacific to sea level rise and climate change", *Climate Research*, vol. 12, 1999, pp. 137-143.
- Moberg K.K., "Extending Refugee Definitions to Cover Environmentally Displaced Persons Displaces Necessary Protection", *Iowa Law Review*, vol. 94, no. 3, 2009, pp. 1107-1113.
- Mooney E., "The Concept of Internal Displacement and The Case for Internally Displaced Persons as a Category of Concern", *Refugee Survey Quarterly*, vol. 24, no. 3, 2005.
- Moore E.J., "Climatic change and migration from Oceania: Implications for Australia, New Zealand and the United States of America", *Population and Environment*, vol. 17, no. 2, 1995, pp. 105-122.
- Moran-Taylor M.J., Taylor M.J., "Land and leña: linking transnational migration, natural resources, and the environment in Guatemala", *Population and Environment*, vol. 32, no. 2-3, 2010, pp. 198-215.
- Morel M., "Environmental Displacement within Kenya. A search for legal protection frameworks", *Journal of Internal Displacement*, May 2011.
- Mörner N.A., "Sea Level Changes and Tsunamis, Environmental Stress and Migration Overseas", *Internationales Asienforum*, vol. 38, no. 3-4, 2007, pp. 353-374.
- Mörner N.A., "Sea Level Changes in Bangladesh New Observational Facts", *Environment, Climate Change, Energy Economics and Energy Policy*, vol. 21, no. 3, July 2010, pp. 235-250.
- Morrissey J., "Rural-urban migration in Ethiopia", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 28-30.
- Morton A., Boncour P., Laczko F., "Human security policy challenges", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 5-7.
- Moser S.C., "Communicating climate change: history, challenges, process and future directions", *Wiley Interdisciplinary Reviews, Climate Change*, vol. 1, no. 1, 2010, pp. 31-53.
- Motta Veiga M., "Migração de Resíduos Tóxicos como Indicador de Injustiça Ambiental", *Revista Pesquisa e Desenvolvimento Engenharia de Produção*, no. 4, 2005, pp. 67-80.
- Moua M., "L'introduction des éthiques environnementales dans la gestion des flux migratoires", *Revue Asylon(s)*, no. 6, novembre 2008.

- Mouat D., "Desertification and societal uncertainties", *Aridlands Newsletter*, (The University of Arizona), no. 60, June 2008, pp. 12-16.
- Munslow B., O'Dempsey T., "Globalisation and Climate Change in Asia: the urban health impact", *Third World Quarterly*, vol. 31, no. 8, December 2010, pp. 1339-1356.
- Mutton D., Emdad Haque C., "Human Vulnerability, Dislocation and Resettlement: Adaptation Processes of River-bank Erosion-induced Displacees in Bangladesh", *Disasters*, vol. 28, no. 1, March 2004, pp. 41-62.
- Muzenda T.N., "The role of social and economic factors and natural disasters in forced population displacements in Africa", *International Journal of Refugee Law*, vol. 7, 1995, pp. 46-54.
- Myers N., "Environmental Refugees", *Population & Environment*, vol. 19, no. 2, 1997, pp. 167-182.
- Myers N., "Environmental Refugees in a Globally Warmed World", *BioScience*, vol. 43, no. 11, 1993 pp. 752-761.
- Myers N., "Environmental refugees: a growing phenomenon of the 21st century", *Philosophical Transactions of The Royal Society B. Biological Sciences*, vol. 357, no. 1420, 2002, pp. 609-613.
- Myers N., "Environmental Security Concerns Sources", *NATO Science for Peace Security Series*, part 1, 2009, pp. 41-53.
- Myers N., "Eco-refugees: a crisis in the making", *People Planet*, vol. 3, no. 4, 1994, pp. 6-9.
- Myers N., "The environmental dimension to security issues", *The Environmentalist*, vol. 6, no. 4, 1986, pp. 251-257.
- Myers N., "Tropical forests. The main deforestation fronts", *Environmental Conservation*, vol. 20, 1993, pp. 9-16.
- Myers S.S, Bernstein A., "The Coming Health Crisis", *The Scientists*, vol. 25, no. 1, 2011, pp. 32.
- Monbiot G., "Climate change displacement has begun – but hardly anyone has noticed", *The Guardian*, 2009.
- Morrow-Jones H.A., Morrow-Jones Ch.R., "Mobility Due to Natural Disaster: Theoretical Considerations and Preliminary Analyses", *Disasters*, vol. 15, no. 2, June 1991, pp. 126-132.
- Mortimore M.J., Adams W. M., "Farmer adaptation, change and “crisis” in the Sahel", *Global Environmental Change*, vol. 11, no. 1, 2001, pp. 49-57.
- Mortreux C., Barnett J., "Climate change, migration and adaptation in Funafuti, Tuvalu", *Global Environmental Change*, vol. 19, no. 1, 2009, pp. 105-112.
- Nah A.M., Bunnell T., "Ripples of Hope: Acehnese Refugees in Post-Tsunami Malaysia", *Singapore Journal of Tropical Geography*, vol. 26, no. 2, July 2005, pp. 249-256.
- Napier J.L., Mondisodza A.N., Andersen S.M., Tost J.T., "System Justification in Responding to the Poor and Displaced in the Aftermath of Hurricane Katrina", *Analyses on Social Issues and Public*

- Policy*, vol. 6, no. 1, December 2006, pp. 57-72.
- Naser M.M., Afroz T., "Human Rights Implications of Climate Change Induced Displacement," *Bond Law Review*, vol. 21, no. 3, 2009.
- Naudé W., "Natural Disasters and International Migration from Sub-Saharan Africa", *Migration Letters*, vol. 6, no. 2, 2009, pp.165-176.
- Nawrotzki R., Diaconu M., Pittman S., "Climate-Change-Induced Human Migration: The Necessity of Collective Global Action", *Global Studies Journal*, vol. 2, no. 1, 2003, pp. 43-58.
- Neuteleers S., "Environmental Refugees: A Misleading Notion for a Genuine Problem", *Ethical Perspectives*, vol. 18, no. 2, 2011, pp. 229-248.
- Nicholls R.J., Nobuo M., "Regional Issues Raised by Sea Level Rise and Their Policy Implications", *Climate Research*, vol. 1, 1998, pp. 5-18.
- Nicholls R.J., Hoozemans F.M.J., Marchand M., "Increasing flood risk and wetland losses due to global sea-level rise: regional and global analyses - The Science of Climate Change", *Global Environmental Change*, vol. 9, Supplement, October 1999, pp. 69-87.
- Nicholls R.J., Marinova N., Lowe J.A., Brown S., Vellinga P., de Gusmao D., Hinkel J., Tol R.S.J., "Sea level rise and its possible impacts given a beyond 4°C world' in the twenty-first century", *Philosophical Transactions of The Royal Society A*, vol. 369, no. 1934, January 2011, pp. 161-181.
- Nieburg P., Waldman R.J., Krumm D.M., "Evacuated Populations — Lessons from Foreign Refugee Crises", *The New England Journal of Medicine*, vol. 353, 2005, pp. 1547-1549.
- Nine C., "Ecological Refugees, States Borders, and the Lockean Proviso", *Journal of Applied Philosophy*, vol. 27, no. 4, November 2010, pp. 359-375.
- Nnoli O., "Desertification, Refugees and Regional Conflict in West Africa", *Disasters*, vol. 14, no. 2, 1990, pp. 132-139.
- Noor H., "Emergency within an emergency: Somali IDPs", *Forced Migration Review*, no. 28, July 2007.
- Odland J., Shumway J.M., "Interdependencies in the timing of migration and mobility events", *Papers in Regional Science*, vol. 72, no. 3, 1993, pp. 221-237.
- O'Lear S., "Migration and the environment: a review of recent literature", *Social Science Quarterly*, vol. 78, pp. 608–618.
- Oliver S., "A new challenge to international law: The disappearance of the entire Territory of a state", *International Journal on Minority and Group Rights*, vol.16, no. 2, 2009, pp. 209-243.
- Oliver-Smith A., "Anthropological Research on Hazards and Disasters", *Annual Review of Anthropology*, vol. 25, 1996, pp. 303-328.



- Ollitrault S., "De la sauvegarde de la planète à celle des réfugiés climatiques. L'activisme des ONG", *Revue Tiers Monde*, vol. 204, no. 4, 2010, pp. 19-34.
- Olsson I.C., Greenberg L.A., Bergman E., Wysujack K., "Environmentally induced migration: the importance of food", *Ecology Letters*, vol. 9, no. 6, 2006, pp. 645-651.
- Opukri C.O., Ibaba I.S., "Oil induced environmental degradation and internal population displacement in the Nigeria's Niger Delta", *Journal of Sustainable Development in Africa*, vol. 10, no. 1, 2008, pp. 173-193.
- Orford J.D., Carter R.W.G., Forbes D.L., "Gravel Barrier Migration and Sea level Rise: Some Observations from Story Head, Nova Scotia, Canada", *Journal of Coastal Research*, vol. 7, no. 1, Spring 1991, pp. 477-489.
- Osofsky H.M., "Environmental Human Rights under the Alien Tort Statute: Redress for Indigenous Victims of Multinational Corporations", *Suffolk Transnational Law Review*, vol. 20, summer 1997.
- Otunnu O., "Environmental Refugees in Sub-Saharan Africa. Causes and Effects", *Refuge*, vol. 12, no. 1, June 1992, pp. 11-14.
- Ouedraogo I., Savadogo P., Tigabu M., Cole R., Odén R.C., Ouadba J-M., "Is rural migration a threat to environmental sustainability in Southern Burkina Faso?", *Land Degradation & Development*, vol. 20, no. 2, 2009, pp. 217-230.
- Ouedraogo I., Tigabu M., Savadogo P., Compaoré H., Odén P.C., Ouadba J-M., "Land cover change and its relation with population dynamics in Burkina Faso, West Africa", *Land Degradation & Development*, vol. 21, no. 5, 2010, pp. 453-462.
- Owens J., "Environmental refugees, corrective justice and a system of compensation", *International Journal of Green Economics*, vol. 2, no. 3, 2008, pp. 311-328.
- Panda A., "Climate Refugees: Implications for India", *Economic and Political Weekly*, vol.14, no. 20, 2010.
- Paavola J., Adger W.N., "Fair adaptation to climate change", *Ecological Economics*, vol. 56, no. 3, 2006, pp. 594-609.
- Patz J.A., Campbell-Lendrum D., Holloway T., Foley J.A., "Impact of regional climate change on human health", *Nature*, vol. 438, 17 November 2005, pp. 310-317.
- Pape J.W., Warren M.D., Johnson Jr. M.D., Daniel W., Fitzgerald M.D., "The Earthquake in Haiti — Dispatch from Port-au-Prince", *New England Journal of Medicine*, 2010.
- Pape J.W., Deschamps M.M., Ford H., Joseph P., Johnson W.D., Fitzgerald D.W., "The GHESKIO Refugee Camp after the Earthquake in Haiti — Dispatch 2 from Port-au-Prince", *New England*

*Journal of Medicine*, March 2010.

- Paul B.K., "Evidence against disaster-induced migration: the 2004 tornado in north-central Bangladesh", *Disasters*, vol. 29, no. 4, pp. 370-385.
- Paul, B. K., "Farmers and public responses to the 1994-95 drought in Bangladesh: a case study", *Quick response report no. 76*, Boulder, CO: Natural Hazards Research and Applications Information Center, 1995.
- Pearce F., "Searching for the climate refugees", *The New Scientist*, vol. 2810, 2011.
- Pebley A.R., "Demography and the Environment", *Demography*, vol. 35, no. 4, 1998, pp. 377-389.
- Pedersen J., "Drought, Migration and Population Growth in the ahel- The Case of Malian Gourma, 1990-1991", *Population Studies*, vol. 49, no. 1, 1995, pp. 111-126.
- Pedersen O.W., "European Environmental Human Rights and Environmental Rights: A Long Time Coming?", *Georgetown International Environmental Human Rights*, vol. 21, no. 1, 2008.
- Peduzzi P., "Is Climate Change Increasing the Frequency of Hazardous Events?", *Environmental and Poverty Times*, vol. 3, February 22 2005, pp. 7.
- Pelling M., Uitto J.A., "Small island developing states: natural disaster vulnerability and global change", *Global Environmental Change*, (Part B Environmental Hazards), vol. 3, no. 2, 2001, pp. 49-62.
- Pelzer M., "Environmentally Displaced Persons not Protected - Further Agreement Required", *Environmental Policy and Law*, vol. 39, no. 2, 2009, pp. 90-91.
- Pender J., "Communnity-led adaptation in Bangladesh", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 54-56.
- Perch-Nielsen S., Battig M., Imboden D., "Exploring the link between climate change and migration", *Climatic Change*, vol. 91, pp. 375-393.
- Percival V., Homer-Dixon T., "Environmental Scarcity and Violent Conflict: The Case of South Africa", *Journal of Peace Research*, vol. 35, no. 3, May 1998, pp. 278-298.
- Perez Foster RM., Goldstein M.F., "Chernobyl Disaster Sequelae in Recent Immigrants to the United States from the former Soviet Union (FSU)", *Journal of Immigrant and Minority Health*, vol. 9, no. 2, 2007, pp. 115-124.
- Pernetta J.C., "Impacts of climate change and sea-level rise on small island states: National and international responses", *Global Environmental Change*, vol. 2, no. 1, March 1992, pp. 19-31.
- Pentinat S.B., "Refugiados Ambientales: El nuevo desafío del derecho internacional del medio ambiente", *Revista de Derecho Valdivia*, vol. 19, no. 2, Diciembre 2006, pp. 85-108.
- Pfister Ch., "The vulnerability of past societies to climatic variation: a new focus for historical climatology in the twenty-first century", *Climatic Change*, vol. 100, no. 1, pp. 25-31.

- Piantoni F., "Les recompositions territoriales dans le Maroni: relation mobilité-environnement", *Revue européenne des migrations internationales*, vol. 18, no. 2, 2002, pp. 11-49.
- Piguet E., "Linking climate change, environmental degradation, and migration: a methodological overview", *Wiley Interdisciplinary Reviews: Climate Change*, vol. 1, no. 4, 2010, pp. 517-524.
- Piguet E., "Migrations et changement climatique", *Futuribles*, no. 341, mai 2008, pp. 31-44.
- Piguet E., Pecoud A., de Guchteneire P., "Migration and Climate Change: An Overview", *Refugee Survey Quarterly*, vol. 30, no. 3, 2011, pp. 1-23.
- Pinto da Cunha J.M., Souchaud S., Baeninger R., do Carmo R.L., "Espaços migratórios e problemática ambiental no Mercosul", *Revista Brasileira de Estudos de População*, vol. 23, no. 1, 2006.
- Pintova E., "Environmental Migration: The consequence of floods", *Dehli Business Review*, vol. 12, no. 2, July-December 2011.
- Posner E.A., "Climate Change and International Human Rights Litigation: A Critical Appraisal", *University of Pennsylvania Law Review*, vol. 155, no. 6, 2007, pp. 1925-1945.
- Pradhan P.K., "Population Growth, Migration and Urbanisation. Environmental Consequences in Kathmandu Valley, Nepal", *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 177-199.
- Prieur M., Marguenaud J.P., Monediaire G., Betaille J., Drobenko B., "Draft Convention on the International Status of Environmentally Displaced Persons", *Revue européenne de droit de l'environnement*, no. 4, 2008, pp. 395-406.
- Prothero R.M., "Forced Movements of Population and Health Hazards in Tropical Africa", *International Journal of Epidemiology*, vol. 23, no. 4, 1994, pp. 657-664.
- Qaiyum A., "Environmental Refugees: Issues and Specific Options", *ITPI Journal*, vol. 5, no. 1, 2008, pp. 15-23.
- Qian W., Zhu Y., "Climate Change in China from 1880 to 1998 and its Impact on the Environmental Condition", *Climatic Change*, vol. 50, 2001, pp. 419-444.
- Quarantelli E. L., "General and particular observations on sheltering and housing in American disasters", *Disasters*, vol. 6, no. 4, 1982, pp. 277-281.
- Quigley W.P., "What Katrina Revealed", *Harvard Law & Policy Review*, vol. 2, 2008, pp. 361-383.
- Radel C., Schmook B., McCandless S., "Environment, transnational labor migration, and gender: case studies from southern Yucatán, Mexico and Vermont, USA", *Population & Environment*, vol. 32, no. 2-3, 2010, 177-197.
- Raleigh C., Urdal H., "Climate Change, Environmental Degradation and Armed Conflict", *Political Geography*, vol. 26, no. 6, 2007, pp. 674-694.
- Raleigh C., "Political Marginalization, Climate Change, and Conflict in African Sahel States",

- International Studies Review*, vol. 12, no. 1, 2010, pp. 69-86.
- Ramlogan R., "Environmental refugees. A review", *Environmental Conservation*, vol. 23, 1996, pp. 81-88.
- Rahmstorf S., "A new view on sea level rise", *Nature Reports*, vol. 4, 2010, pp. 44-45.
- Rebert T.S., "The Rising Flood? Environmental Refugees in a Political Ecology", *Perspective*, 2006.
- Rechkemmer A., "Environmental migration and environmental refugees - The very special case of desertification", *Gate-Eschborn*, part 3, 2000, pp. 6-8.
- Rechkemmer A., "Societal Impacts of Desertification: Migration and Environmental Refugees?" *Hexagon Series on Human and Environmental Security and Peace*, vol. 4, part 2, 2009, pp. 151-158.
- Reed R., "Rising Seas and Disappearing Islands: Can Island Inhabitants Seek Redress Under the Alien Tort Claims Act?", *Pacific Rim Law and Policy Journal*, vol. 11, no. 2, 2002, pp. 399-430.
- Regan K.H., "The Case for Enhancing Climate Change Negotiations with a Labor Rights Perspective", *Columbia Journal of Environmental Law*, vol. 35, no. 1, 2010.
- "Regular Debate: What role should the UN play in the case of environmental refugees", *The Ecologist*, vol. 32, no. 3, 2002, pp. 20.
- Renaud F.G., Dun O., Warner K., Bogardi J., "A Decision Framework for Environmentally Induced Migration", *International Migration*, vol. 49, June 2011, pp. 5-29.
- Retaille D., "Sécheresse, migration, aménagement du territoire en Mauritanie", *Revue de Géographie de Lyon*, vol. 70, no. 3, 1995, pp. 233-238.
- Reuveny R., "Climate change-induced migration and violent conflict", *Political Geography*, vol. 26, no. 6, 2007, pp. 656-673.
- Reuveny R., "Ecomigration and Violent Conflict. Case Studies and Public Policy Implications", *Human Ecology*, vol. 36, no. 1, 2008, pp. 1-13.
- Reuveny R. Peterson Allen A., "Los refugiados ambientales y sus consecuencias en el futuro", *Ecologia Politica*, 2007, pp. 21.
- Reuveny R., Moore W.H., "Does Environmental Degradation Influence Migration? Emigration to Developed Countries in the Late 1980s and 1990s", *Social Science Quarterly*, vol. 90, no. 3, 2009, pp. 461-479.
- Ribeiro R., "Refugiados ambientais, o desafio do século 21", *Observatório Eco*, 08 de junho de 2010.
- Richmond A., "The environment and refugee. Theoretical and policy issues", *Bulletin démographique des Nations Unies*, no. 39, 1995, pp. 1-17.
- Richmond A.H., "Reactive Migration: Sociological Perspectives On Refugee Movements", *Journal of Refugee Studies*, vol. 6, no. 1, 1993, pp. 7-24.

- Risse M., "The Right to Relocation: Disappearing Island Nations and Common Ownership of the Earth", *Ethics & International Affairs*, vol. 23, no. 3, 2009, pp. 281-300.
- Romer K., "'Environmental' refugees?", *Forced Migration Review*, 2006.
- Roncoli C., Ingram K., "The costs and risks of coping with drought: Livelihood impacts and farmers' responses in Burkino Faso", *Climate Research*, vol. 19, 2001, pp. 119-132.
- Roy P., Connell J., "Climatic Change and the Future of Atoll States", *Journal of Coastal Research*, Autumn 1991, vol. 7, no. 4, pp. 1057-1075.
- Ruitenbeek H.J., "Distribution of ecological entitlements: Implications for economic security and population movement", *Ecological Economics*, vol. 17, no. 1, April 1996, pp. 49-64.
- Russell N.J., Zahirovic-Herbert V., "The Impact of a Migration Shock on Tenant Satisfaction: The Case of Hurricane Katrina and Baton Rouge, Louisiana", *Migration Letters*, vol. 5, no. 1, 2008, pp. 79-88.
- Saba L., "The protection of environmentally displaced persons and their right to a healthy and sustainable environment", *International Journal of Private Law*, vol. 2, no. 1, 2009, pp. 76-88.
- Sachs J., "Climate Change Refugees", *Scientific American*, vol. 296, no. 6, June 2007, pp. 43.
- Safriel U.N., "Status of Desertification in the Mediterranean Region", *NATO Science for Peace and Security Series*, part 1, 2009, pp. 33-73.
- Saier M.H., "Desertification and Migration", *Water, Air & Soil Pollution*, no. 205, Supplement 1, 2010, pp. 31-32.
- Salaudiddin Md., Ashikuzzaman Md., "Nature and extent of population displacement due to climate change-triggered disasters in the south-western coastal region of Bangladesh", *Management of Environmental Quality: An International Journal*, vol. 22, Issue 5, 2011, pp. 620 – 631.
- Saldana-Zorrilla S.O., Sandberg K., "Spatial econometric model of natural disaster impacts on human migration in vulnerable regions of Mexico", *Disasters*, vol. 33, no. 4, 2009, pp. 591-607.
- Saleyhan L., Gleditsch K.S., "Refugees and the spread of civil war", *International Organisation*, vol. 60, no. 2, 2006, pp. 335-366.
- Sanderson M.R., "Globalization and the Environment: Implications for Human Migration", *Human Ecology Review*, vol. 16, no. 1, 2009, pp. 93-102.
- Sarwar G.M., Khan M.H., "Sea Level Rise. A Threat to The Costs of Bangladesh", *Internationales Asienforum*, vol. 38, no. 3-4, 2007, pp. 375-397.
- Sastry N., "Tracing the Effects of Hurricane Katrina on the Population of New Orleans. The Displaced New Orleans Residents Pilot Study", *American Journal of Public Health*, vol. 99, November 2009, pp. 725-731.
- Satterthwaite D., "The implications of population growth and urbanization for climate change",

- Environment and Urbanization*, vol. 21, no. 2, 2008, pp. 545-567.
- Schareika N., "Environmental Knowledge and Pastoral Migration among the Wodaabe of South-Eastern Niger", *Nomadic Peoples*, vol. 5, 2001.
- Scheffran J., Marmer E., Sow P., "Migration as a contribution to resilience and innovation in climate adaptation: Social networks and co-development in Northwest Africa", *Applied Geography*, vol. 33, pp. 119-127.
- Schininà G., Hosn M.A., Ataya A., Dieuveut K., Salem M-A., "Psychosocial response to the Haiti earthquake: the experiences of International Organization for Migration", *Intervention*, vol. 8, no. 2, july 2010, pp. 158-164.
- Schipper L., Pelling M., "Disaster risk, climate change and international development: scope for, and challenges to, integration", *Disasters*, vol. 30, no. 1, 2006, pp. 19-38.
- Schmidt Ch.W., "Keeping Afloat. A Strategy for Small Island Nations", *Environmental Health Perspectives*, vol. 113, no. 9, September 2005, pp. 607 – 609.
- Schneider de Jesus T., "Migrantes ambientais. Um olhar sobre o futuro do planeta", *Revista Âmbito Jurídico*, fevereiro 2011.
- Schwartz M.L., "International Legal Protection for Victims of Environmental Abuse", *Yale Journal of International Law*, vol. 18, 1993, pp. 355-387.
- Sciama Y., "Climat: L'équilibre est rompu", *Science & Vie*, no. 1061, February 2006, pp. 48-76.
- Schipper L., Pelling M., "Disaster risk, climate change and international development: scope for, and challenges to, integration", *Disasters*, vol. 30, no. 1, 2006, pp. 32.
- Sgro A., "Towards recognition of environmental refugees by the European Union", *REVUE Asylon(s)*, no. 6, novembre 2008.
- Shandra J.M., London B., Williamson J.B., "Environmental Degradation, Environmental Sustainability, And Overurbanization in The Developing World: A Quantative Cross-National Analisis", *Sociological Perspectives*, vol. 46, no. 3, Fall 2003, pp. 309-329.
- Shen S., Binns T., "Pathways, motivations and challenges: contemporary Tuvaluan migration to New Zealand", *Geojournal*, vol. 10, 2010.
- Shen S., "Contrasted Views on Environmental Change and Migration: The Case of Tuvalan Migration in New Zealand", *International Migration*, vol. 49, 2011, pp. 224-242.
- Shrestha S.S., Bhandari P., "Environmental security and labor migration in Nepal", *Population and Environment*, vol. 29, no. 1, 2007, pp. 25-38.
- Skanavis C., Sakellari M., "Environmental education and participation in the environmental decision making process: the best way to pre-empt the environmental refugees' problem" [in] 10<sup>th</sup> Conference on Environmental Education in Europe: Thinking and acting outside the box",

- October 15-19 2008, La Valetta, pp. 81-87.
- Skov Ch., Aarestrup K., Baktoft H., Brodersen J., Bronmark Ch., Hansson L-A., Nielsen E.E., Nielsen T., "Influences of environmental cues, migration history, and habitat familiarity on partial migration", *Behavioral Ecology*, 2010.
- Smith C., Kniveton D.R., Wood S., Black R., "Climate Change and Migration: A Modelling Approach", *Advances in Global Change Research*, vol. 43, 2011, pp. 179-201.
- Smith S.K., McCarty Ch., "Demographic Effects of Natural Disasters: A Case Study of Hurricane Andrew", *Demography*, vol. 33, no. 2, 1996, pp. 265-275.
- Smith P.J., "Climate Change, Mass Migration and the Military Response", *Orbis*, vol. 51, no. 4, 2007, pp. 617-633.
- Smyk M., "Environmental Migrants: The Neglected Refugee of the 21st century", *Columbia Political Review*, October 2010, <http://www.cpreview.org/2010/10/environmental-migrants/>
- Soons A.H.A. 990). The Effects of a Rising Sea Level on Maritime Limits and Boundaries", *Netherlands International Law Review* 37(2): 207-223.
- Sovacool B.K., "Perspectives of climate change risks and resilient island planning in the Maldives", *Mitigation and Adaptation Strategies for Global Change*, November 2011.
- Sowers J., Vengosh A., Weinthal E., "Climate change, water resources, and the politics of adaptation in the Middle East and North Africa", *Climatic Change*, vol. 104, no. 3-4, 2010, pp. 599-627.
- Söderbergh C., "Environmental Justice and the Rights of Ecological Refugees", *Climate and Development*, vol. 2, no. 3, 2010, pp. 295-298.
- Sparenberger R.F., Vergani V., "Migração, Vulnerabilidade E (in) Justiça Ambiental: Desafios e Perspectivas", *Revista de direito*, no. 33, Janeiro/Juho 2010, pp. 130-147.
- Spear S., "Refugees Escape Ravages of Climate Change", *Journal of Environmental Health*, vol. 66, no. 1, 2003, pp. 38.
- Stal C., "Flooding and Relocation: The Zambezi River Valley in Mozambique", *International Migration*, vol. 49, 2011, pp. 125-145.
- Star C., "Climate justice campaigns and environmental refugees" [in] *Ecopolitics XV: Environmental Governance: Transforming Regions and Localities*, Macquarie University, Sydney, 12-14 November 2004.
- Stavropoulou M., "Indigenous Peoples Displaced from Their Environment: Is There Adequate Protection", *Colorado journal of International Environmental Law and Policy*, no. 5, 1994, pp. 104.
- Stavropoulou M., "Drowned in definitions", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 11-13.

- Stephenson J., "Population dynamics and climate change: what are the links?", *Journal of Public Health*, vol. 32, no. 2, 2010, pp. 150-156.
- Stiles D., "Linkages between dryland degradation and migration. A methodology", *Desertification Control Bulletin*, 1997, pp. 9-18.
- Stoett P., "Redefining 'environmental refugees' Canada and the UNHCR", *Canadian Foreign Policy Journal*, vol. 2, no. 3, 1994, pp. 29-42.
- Stojanov R., "Environmental Refugees- Introduction", *Geographica*, vol. 38, 2004, pp. 77-98.
- Stojanov R., Novosák J., "Environmental Migration in China", *Geographica*, vol. 39, 2006, pp. 65-82.
- Stone D., "Asking the right question", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 42-44.
- Suhrke A., "Environmental Degradation and Population Flows", *Journal of International Affairs*, vol. 47, 1994, pp. 473-96.
- Suhrke A., Visentin A., "The Environmental Refugee: A New Approach", *Ecodecision*, no. 2, 1991, pp. 73-84.
- Svart L.M., "Environmental Preference Migration: A Review", *Geographical Review* vol. 66, no. 3, 1976, pp. 314-330.
- Swain A., "Environmental migration and conflict dynamics: focus on developing regions", *Third World Quarterly*, vol. 17, no. 55, pp. 959-973.
- Swain A., "Displacing the Conflict: Environmental Destruction in Bangladesh and Ethnic Conflict in India", *Journal of Peace Research*, vol. 33, no. 2, 1996, pp. 189-204.
- Tacoli C., "Crisis or adaptation? Migration and climate change in a context of high mobility", *Environment and Urbanization*, vol. 21, no. 2, 2009, pp. 513-525.
- Tan Y., Guo F., "Environmental Concerns and Population Displacement in West China", Paper presented at the 8<sup>th</sup> APMRN Conference, 26-29 May, 2007, Fuzhou, China.
- Taylor P.S., Vasey T., "Drought Refugee and Labor Migration to California, June-December 1935", *Monthly Labor Review*, 1936.
- Tanno de Souza R.K., "História da imigração japonesa: uma contribuição à compreensão dos fatores ambientais na produção das doenças crônico-degenerativas", *Ciência, Cuidado e Saúde*, vol. 1, no. 1, 2002.
- Tellier S., Calballo M., "Migration, Climate, and Health", *Ugeskr Laeger*, 26 Oct 2009, vol. 171, no. 44, pp. 3191-3194.
- Thomas S.L., Thomas S.D.M., "Displacement and Health", *British Medical Bulletin*, vol. 69, no. 1, 2004, pp. 115-127.



- Thomas D.S.G., Twyman C., "Equity and justice in climate change adaptation amongst natural-resource-dependent societies", *Global Environmental Change*, vol. 15, no. 1, 2005, pp. 115-124.
- Thornton F., "Stormy Weather: The Challenge of Climate Change and Displacement: David Corlett", (book review), *International Journal of Refugee Law*, vol. 21, no. 4, 2009, pp. 851-853.
- Tickell C., "The Quality of Life: What Quality? Whose Life?", *Interdisciplinary Science Reviews*, vol. 17, no. 1, March 1992, pp. 19-25.
- Tickell C., "Human Effects of Climate Change: Excerpts from a Lecture Given to the Society on 26 March 1990", *The Geographical Journal*, vol. 56, no. 3, November 1990, pp. 325-329.
- Togochog E., "Ecological Migration and Human Rights", *China Rights Forum*, no. 4, 2006.
- Toole M.J., Waldman R.J., "Refugees and Displaced Persons. War, Hunger, and Public Health", *The Journal of The American Medical Association*, vol. 270, no. 5, 1993, pp. 600-605.
- Townsend M., "Environmental refugees", *Ecologist*, vol. 32, no. 6, July 2002, pp. 22-25.
- Torry W.I., "Anthropological Studies in Hazardous Environment: Past Trends and New Horizons", *Current Anthropology*, vol. 20, no. 3, 1979, pp. 517-540.
- Tsosie R.A., "Indigenous People and Environmental Justice: The Impact of Climate Change", *University of Colorado Law Review*, vol. 78, 2007, pp. 1625-1658.
- Tucker C.J., Dregne H.E., Newcomb W.W., "Expansion and contraction of the Sahara desert from 1980 to 1990", *Science*, vol. 253, pp. 299-301.
- Tully S., "Like Oil and Water: A Sceptical Appraisal of Climate Change and Human Rights", *Australian International Law Journal*, vol. 15, 2008, pp. 213-233.
- Tully S., "Contribution of Human Rights as an Additional Perspective on Climate Change Impacts within the Pacific", *New Zealand Journal of Public International Law*, vol. 5, 2007, pp. 169.
- Turk V., Edwards A., "Introductory Note to the Bellagio Summary of Deliberations on Climate Change and Displacement", *International Journal of Refugee Law*, vol. 23, no. 3, 2011, pp. 558-560.
- Turner A., Sameera P., Daley A., Paramjit G., "Sri Lankan tsunami refugees: a cross sectional study of the relationships between housing conditions and self-reported health", *International Health and Human Rights*, vol. 9, no. 1, 2009.
- Turton D., Turton P., "Spontaneous resettlement after drought. A Mursi case study", *Disasters*, vol. 8, no. 3, 1984, pp. 78-89.
- Tyson P.D., Lee-Thorp J., Holmgren K., Thackeray J.F., "Changing Gradients of Climate Change in Southern Africa during the Past Millennium: Implications for Population Movements", *Climatic Change*, vol. 52, no 1-2, 2002, pp. 129-135.
- Unruh J., Cligget L., Hay R., "Migrant land rights reception and 'clearing to claim' in sub-Saharan Africa: A deforestation example from southern Zambia", *Natural Resources Forum*, vol. 29, no.

- 3, August 2005, pp. 90-198.
- Urdal H., "People vs. Malthus: Population Pressure, Environmental Degradation, and Armed Conflict Revisited", *Journal of Peace Research*, July 2005, vol. 42, no. 4, 2005, pp. 417-434.
- Urosevic N., "Environmental 'Refugees': Should the UNHCR Enlarge Its Mandate to Include Environmental Migrants?", *The Canadian Undergraduate Journal of Development Studies*, vol. 6, no. 3, fall/winter 2009, pp. 27-35.
- Vedantam S., "Climate Fears Are Driving 'Ecomigration' Across Globe", *Washington Post*, Monday, February 23, 2009.
- Van Aalst M., "The impacts of climate change on the risk of natural disasters", *Disasters*, vol. 30, no. 1, 2006, pp. 5-18.
- Van der Gesest K., "Migration and environment in Ghana: a cross-district analysis of human mobility and vegetation dynamics", *Environment and Urbanization*, vol. 22, no. 1, April 2010, pp. 107-123.
- Van Hear N., "Locating internally displaced people in the field of refugee studies", *Norwegian Journal of Geography*, summer 2000.
- Vidal J., "Pacific Atlantis: first climate change refugees", *The Guardian*, 25<sup>th</sup> November 2005.
- Walther G-R., Post E., Convey M., Menzel A., Parmesan C., Beebee T.J.C., Fromentin J-M., Hoegh-Guldberg O., Bairlein F., "Ecological responses to recent climate change", *Nature*, no. 416, 28 March 2002, pp. 389-396.
- Wani P., "Effects of disasters on population redistribution" [in] Sin A. (ed.), *Disaster Prevention and Management in Sudan*, Khartoum University Press, 1991.
- Wang K., "Environmental migration and sustainable development A case study of southwest China", *Chinese Geographical Science*, vol. 8, no. 3, 1998, pp. 271-280.
- Warner K., "European (im)migration policy and environmental change: institutional and governance gaps", *European View*, vol. 9, no. 2, 2010, pp. 189-204.
- Warner K., "Global environmental change and migration: Governance challenges", *Global Environmental Change*, vol. 20, no. 3, 2010, pp. 402-413.
- Warner K., Laczko F., "A global research agenda", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 59-61.
- Warner K., Hamza M., Oliver-Smith A., Renaud F., Julca A., "Climate change, environmental degradation and migration", *Natural Hazards*, vol. 55, no. 3, pp. 689-715.
- Warner K., Dun O., "Field observations and empirical research" *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 13-14.

- Webb A.P., Kench P.S., "The dynamic response of reef islands to sea-level rise: Evidence from multi-decadal analysis of island change in the Central Pacific", *Global and Planetary Change*, vol. 72, no. 3, 2010, pp. 234-246.
- Webersik Ch., Esteban M., Shibayama T., "The economic impact of future increase in tropical cyclones in Japan", *Natural Hazards*, vol. 55, no. 2, 2010, pp. 233-250.
- Weinstein T., "Prosecuting Attacks that Destroy the Environment: Environmental Crimes or Humanitarian Atrocities?", *Georgetown International Environmental Law Review*, vol. 17, no. 4, 2005, pp. 697 – 722.
- Westing A.H., "The Almería Statement on Desertification and Migration", *Environmental Conservation*, vol. 21, 1994, pp. 179-181.
- Westing A.H., "Environmental Refugees: A Growing Category of Displaced Persons", *Environmental Conservation*, vol. 19, 1992, pp. 201-207.
- Westing A.H., "Population, desertification, and migration", *Environmental Conservation*, vol. 21, 1994, pp. 110–114.
- Westra L., "Ecological Integrity and Biological Integrity: The Right to Life and the Right to Health in Law", *Transnational Law and Contemporary Problems*, vol. 18, no. 3, 2009.
- Wihtol de Wenden C., "Les enjeux migratoires comme facteurs de recomposition des sphères d'influence", *Revue internationale et stratégique*, no. 72, 2008/4.
- Williams A., "Turning the Tide: Recognizing Climate Change Refugees in International Law", *Law & Policy*, vol. 30, no. 4, 2008, pp. 502-529.
- Williams S., "'Do What You Can Do, With What You Have, Where You Are, Assessing the Plight of Climate Change Refugees and Approaches to Fill the Gaps Within the International Legal Framework", *Chicago-Kent Journal of Environmental and Energy Law*, vol. 103, 2011, pp. 103-129.
- Woehlcke M., "Environmental Refugees", *Aussenpolitik*, vol. 43, no. 3, 1992, pp. 287.
- Wood W.B., "Forced Migration: Local Conflicts and International Dilemmas", *Annals of the Association of American Geographers*, vol. 84, no. 4, 1994, pp. 607-634.
- Wu L.G., "Ethnic issues in environmental migration", *Inner Mongolia Social Sciences*, vol. 24, no.4, 2003, pp. 12-14. (article in Chinese).
- Van der Geest K., de Jeu R., "Ghana", *Forced Migration Review*, issue 31 (Climate change and displacement), October 2008, pp. 16-17.
- Van der Geest K., "North-South Migration in Ghana: What Role for the Environment?", *International Migration*, vol. 49, 2011, pp. 69-94.
- Verhaeghe L., "Quels droits pour les réfugiés environnementaux qui perdront leur Etat? Le cas de

- Tuvalu", *Revue Asylon(s)*, no. 6, novembre 2008.
- Vigdor J., "The Economic Aftermath of Hurricane Katrina", *Journal of Economic Perspectives*, vol. 2, 2008, pp. 135-154.
- Villalón Hernández Y., "Refugiados Ambientales", *Revista jurídica de la Comunidad de Madrid*, no. 28, 2009, pp. 27-46.
- Vlassopoulou Ch., "Les migrations environnementales entre secteurs d'action publique", *REVUE Asylon(s)*, no. 6, novembre 2008.
- Vogel C.H, Binns T., "People and drought in South Africa: reaction and migration", *People and Environment in Africa*, 1995, pp. 249-256.
- Xue Ch., "Causes of land loss in Tuvalu, a small island nation in the pacific", *Journal of Ocean University of China*, vol. 4, no. 2, 2005, pp. 115-123.
- Yamada K, Nunn P.D, Mimura N., Michida S., Yamamoto M., "Methodology for the assessment of vulnerability of South Pacific island countries to sea-level rise and climate", . *J Global Environ Eng*, vol. 1, 1995, pp. 101–112.
- Yamamoto L., Esteban M., "Vanishing Island States and Sovereignty", *Ocean and Coastal Management*, vol. 53, no. 1, 2010, pp. 1-9.
- Yan T., Qian W.Y., "Environmental Migration and Sustainable Development in the Upper Reaches of the Yangtze River", *Population & Environment*, vol. 25, no. 6, 2004, pp. 613-636.
- Yang H., Li X., Zhang Y., Zehnder A.B.J., "Environmental-Economic Interaction and Forces of Migration: A Case Study of Three Counties in Northern China" *Environmental Change and its Implications for Population Migration*, (Advances in Global Change Research, vol. 20), 2004, pp. 267-288.
- Yin X-j., Luo Y-p., "Eco-migration and Urbanization in the Immigrant Areas in the Sanjiangyuan Regions", *Journal of Qinghai Normal University*, february 2007.
- Yong C., "A Preliminary Study of Hazard-Induced Migration", *Journal of Catastrophology*, February 2009.
- Zaelke D., Cameron J., "Global Warming and Climate Change: An Overview of the International Legal Process", *American University Journal of International Law and Policy*, vol. 5, Winter 1990.
- Zahir S., Sarker R., Al-Mahmud Z., "An interactive decision support system for implementing sustainable relocation strategies for adaptation to climate change: a multi-objective optimisation approach", *International Journal of Mathematics in Operational Research*, vol. 1, no. 3, 2009, pp. 326-350.
- Zaman M.Q., Wiest R.E., "Riverbank Erosion and Population Resettlement in Bangladesh",

*Practicing Anthropology*, vol. 13, no. 3, 1991, pp. 29-33.

Zaman M.Q, "The Social and Political Context of Adjustment to Riverbank Erosion Hazard and Population Resettlement in Bangladesh", *Human Organization*, vol. 48, no. 3, 1989, pp. 196-205.

Zaman M., "Development and displacement in Bangladesh: Towards a resettlement policy", *Asian Survey*, vol. 36, no. 7, 1996, pp. 7.

Zartner Falstrom D., "Stemming the Flow of Environmental Displacement: Creating a Convention to Protect Persons and Preserve the Environment", *Colorado Journal of International Environmental Law and Policy*, no. 6, vol. 1, 2001.

Zetter R.W., "More labels, fewer refugees remaking the refugee label in the era of globalization", *Journal of Refugee Studies*, vol. 20, no. 2, 2007, pp. 172-192.

Zetter R., "Legal and Normative Frameworks", *Forced Migration Review*, vol. 31, 2008, pp. 62-63.

Zhang Q., "Mongolie Intérieure: Désertification, Migration et Transformations des Modes de Vie", *Hommes et Migrations*, no. 1284, 2010, pp. 42-55.

#### **4.4 REPORTS, ANALYSIS, WORKING PAPERS, PROJECTS**

Acketoft T., "Environmentally induced migration and displacement. A 21<sup>st</sup> century challenge", Preliminary draft report 2 December 2008, Committee on Migration, Refugees and Population, Raad van Europa, 2008.

*A Citizen's Guide to Climate Refugees*, Friends of Earth, Australia, Fitzroy, Australia, 2007.

Adamo S.B., *Environment-induced Population Displacements*, CIESIN & Population-Environment Research Network, 4/28/2009.

Adamo S.B., de Sherbinin A., "The Impact of Climate Change on the Spatial Distribution of Populations and Migration. A Report prepared for the United Nations Population Division", CIESIN & The Earth Institute at Columbia University, 2008.

Afifi T., "Environment, Climate Change and Human Displacement: From empirical evidence to action", Keynote speech and Closing Remarks. Symposium on Climate Change, Water Stress, Conflict and Migration, 21 September 2011, The Hague.

Akter T., *Climate Change and Flow of Environmental Displacement in Bangladesh*, The Innovators (Centre for Research and Action on Development), Dhaka, 2009.

Alam S., *Environmentally Induced Migration from Bangladesh to India*, The Institute for Defence Studies and Analyses, New Delhi, 2003.

Alam K., Fatema N., Bashar A., "Gender, Human Security and Climate Change in Bangladesh", Action Aid, Bangladesh, 2009.

Alexeev A., Good D.G., Reuveny R., "Weather-Related Disasters and International Migration",

- (Research Paper), School of Public and Environmental Affairs Indiana University, 2007.
- Allen K., Ober K., "Desertification and Sea-Level Rise: New Trends Causing Environmental Refugees in the Twenty First Century", (Working Paper), American University, April 2008.
- Ammer M., *Climate change and Human Rights: The Status of Climate Refugees in Europe*, (Research Paper on Climate Change), Institute of Human Rights (BIM), Austria, June 2009.
- André M., "The Earthquake in Chile" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, 2011, pp. 49-57.
- Barker A., Roop J., "Climate change migrants: A case study analysis", (Working Paper), Asian Development Bank, December 2008.
- Barnett A., "Report disperses migration myth", *Nature Reports Climate Change*, 11 June 2009.
- Barnett J.R., Webber M., *Accommodating Migration to Promote Adaptation to Climate Change*, (World Bank Policy Research Working Paper), World Bank, Washington, 2010.
- Barnett J., Chamberlain N., "Migration and Climate Change Adaptation. Implications for the Pacific", Institute of Policy Studies Publications, Wellington, 2009.
- Barnett J., Adger N., *Climate Dangers and Atoll Countries*, Working Paper no. 7, Tyndall Centre for Climate Change, University of East Anglia, Norwich, 2001.
- Barrios S., Bertinelli L., Streobl E., *Climatic change and rural-urban migration. The case of sub-Saharan Africa*, (CORE Discussion Paper, no. 46/2006), CORE, Louvain-la-Neuve, 2006.
- Berry L., *The Impact of Environmental Degradation on Refugee-host Relations: a Case Study from Tanzania*, (Working Paper no. 151), UNHCR EPAU, Geneva, 2008.
- Biermann F., van Asselt H., Boas I., Massey E., Pattberg P., Edenhofer O., Flaschland Ch., Neufeldt H., Zelli F., Strippel J., Alessi M., *Climate Governance Post-2012, Options for EU Policy-Making*, (CEPS Policy Briefs Paper no. 177), Centre for European Policy Studies (CEPS), Brussels, 2009.
- Bilsborrow R.E., *Rural poverty, migration, and the environment in developing countries. Three case studies*, Policy Research Working Paper Series, World Bank, Washington, 1992.
- Black R., *Environmental Refugees: Myth or Reality*, Working Paper no. 34, UNHCR, Geneva, 2001.
- Black R., Kniveton D., Skeldon R., Coppard D., Murata A., Schmidt-Verkerk K., *Demographics and Climate Change: Future Trends And their Policy Implications for Migration*, Development Research Centre on Migration, Globalisation and Poverty, University of Sussex, June 2008, (Working Paper, T-27).
- Boano C., Zetter R., Morris T., *Environmentally displaced people: understanding the linkages between environmental change, livelihoods and forced migration*, University of Oxford Refugee

- Studies Centre, 2008.
- Boland S., Dollery B., *The Economic Significance of Migration Remittances in Tuvalu*, Working Paper Series in Economics, no. 2005/10, University of New England School of Economics, 2010.
- Boncour P., "Climate Change, Environment and Migration", Climate Change and Practice <http://climate-l.iisd.org/guest-articles/>
- Botez R.N., ". Displacement risks from glacial melting in Nepal" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, pp. 67-77.
- Brears R., *Environmental Refugees from the Maldives: Are They Protected?*, SSRN Working Papers, 2009.
- Brown L., *Troubling New Flows of Environmental Refugees*, Earth Policy Institute, 2004.
- Brown L., "Las nuevas oleadas de refugiados ambientales", 2004, <http://www.terra.org/articulos/art01538.html>
- Brown L.R., Jacobson J.L., *The future of urbanization. Facing the ecological and economic constraints*, Worldwatch Institute, Washington, 1987.
- Brown L.R., *Rising Sea Level Forcing Evacuation of Island Country*, Earth Policy Institute, Washington, November 15, 2001.
- Brown O., *Migration and Climate Change*, International Organization for Migration (IOM), 2008.
- Brown O., *Climate change and forced migration: Observations, projections and implications*, (Occasional Paper 2007/17), Human Development Report, UNDP, Geneva, 2008.
- Burbridge P., Norgaard B., Hartshorn G., *Environmental guidelines for resettlement projects in the humid tropics*, FAO Environment and Energy Papers, Food and Agricultural Organization of the United Nations (FAO), Rome, 1988.
- Burkett M., "In Search of Refuge: Pacific Islands, Climate-Induced Migration, and the Legal Frontier", *Asia Pacific Issues*, no. 98, January 2011.
- Burleson E., "Climate Change Displacement to Refuge", University of Oregon Symposium on Climate Change Equity, (Journal of Environmental Law and Litigation), 2009.
- Byravan S., Rajan S.C., Bangarajan R., *Sea level rise: Impact on major infrastructure, ecosystems and land along the Tamil Nadu coast*, (working Paper), Madras, IMFR-CDF, Indian Institute of Technology, 2010.
- Campana S., *Climate Change and the Mediterranean: Reframing the Security Threat Posed by Environmental Migration*, (Research Project Working Paper), Research Group Climate and Security (CLISEC), June 2010.
- Capellini N., Castro C.M., Gutjahr E., "Patterns of environmental migration in Brazil: three case

- studies" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, 2011, pp. 87-100.
- Carius A., "Climate Change and Security in Africa Challenges and international policy context", Paper commissioned by the United Nations Office of the Special Adviser on Africa (OSAA), Berlin, 2009.
- Castles S., *Environmental Change and Forced Migration. Making Sense of the Debate*, Working Paper, no. 70, UNHCR, Geneva, 2002.
- Chaplin S., "Climate-Related Displacement and Human Security in South Asia. A Review of the Social Science Research", Institute for Social Security, La Trobe University, Australia, 2011.
- Ćirović M., "Eco-Migrations", *VIII Skup privrednika i naučnika*, 2011, pp. 418-426.
- Christian Aid, *The climate of poverty: facts, fears and hopes – A Christian Aid report*, Christian Aid, London, 2006.
- Christian Aid, *Human tide: the real migration crisis – A Christian Aid report*, Christian Aid, London, 2007.
- Choi K. H., *Re-conceptualizing Environmentally Sustainable City*, (Working Paper), Department of Geography and Resource Management, The Chinese University of Hong Kong, [http://www.kadinst.hku.hk/sdconf10/Papers\\_PDF/p562.pdf](http://www.kadinst.hku.hk/sdconf10/Papers_PDF/p562.pdf)
- Clark Ch., "Environmental Migrants: Defining the roles of the Developed and Developing States", *Paper presented at the annual meeting of the Southern Political Science Association, Hotel InterContinental, New Orleans, Louisiana*, January 05, 2011.
- Clark W.A.V., *Environmentally Induced Migration and Conflict*, Berlin, Heidelberg: Springer-Verlag, 2008.
- Climate Change, Environmental Degradation and Migration. Addressing Vulnerabilities and Harnessing Opportunities*, International Organization for Migration, Hammersmith Press, London 2009.
- Climate Change and Human Rights: A Rough Guide*, International Council on Human Rights Policy, 2008.
- Climate change and migration: The debate on causality and the legal position of affected persons*, (Policy Brief, no. 15, December 2009).
- Climate change migration: what do we do?*, OECD Publishing, Paris, 2009.
- Climate Change, Migration, and Population Growth*, Policy Issue & Brief, Population Action International, 2009.
- Climate change, migration, and displacement: Impacts, vulnerability, and adaptation options*, Submission by IOM, UNHCR, UNU, NRC, and RSG on the HR of IDPS, 5th session of the Ad



- Hoc Working Group on Long-Term Cooperative Action under the Convention (AWG-LCA 5). Bonn, March 29 ñ April 8, 200.
- Compendium of IOM's activities in migration, climate change and the environment*, International Organization for Migration, Geneva, 2009.
- Coniglio N., "I migranti del clima", *Equilibri. Rivista per la sviluppo sostenibile*, no. 2, Agosto 2011, pp. 273-286.
- Conisbee M., Simms A., *Environmental Refugees: The Case for Recognition*, New Economics Foundation, 2003.
- Crisp J., *Africa's refugees: patterns, problems and policy changes*, (Working Paper), Evaluation and Policy Analysis Unit – UNHCR, 2000.
- Cugusi B., Piccarozzi M., *Environmental change and human mobility A thematic literature and organisational review*, Prepared for the International Conference Towards The G8 Summit, Rome 21<sup>st</sup> April 2009.
- Cutter S., *The Katrina exodus: internal displacements and unequal outcomes*, Government Office for Science, London 2011, available on: <http://www.bis.gov.uk/>
- Daniel H., Martin-Bordes J.L. (eds.), *Water Related Migration, Changing Land Use And Human Settlements*, Knowledge No. 4, United Nations University, 2009.
- de Abreu Batista Claro C., "Environmentally Displaced People and Migration Policies in the 21<sup>st</sup> Century", see: [http://rimd.reduaz.mx/ponencias\\_flasco/PonenciaCarolinaAbreuBatista.pdf](http://rimd.reduaz.mx/ponencias_flasco/PonenciaCarolinaAbreuBatista.pdf)
- de la Cinta Arenas Hidalgo N., "La Degradación Medioambiental y los Desplazamientos de Población", Centro de Estudios Sociais Laboratorio Associado, Universidade de Coimbra.
- de Ramaix Ch-É., "Migration and relief action in drought-affected Darfur" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, 2011, pp. 77-86.
- de Sherbinin A., Castro M., Gemenne F., *Preparing for Population Displacement and Resettlement Associated with Large Climate Change Adaptation and Mitigation Projects*, Background Paper for the Bellagio Workshop, 2-6 November 2010.
- Deng Q., "Natural Disasters, Migration and Urban Insecurity in China", (Working Paper), Interconnection Among Global Problems in Northeast Asia, Nautilus Institute for Security and Sustainability, 2009-2010.
- Desertification, Migration & Local Development*, (International Experts' Consultation), The Global Mechanism of the United Nations Convention to Combat Desertification, Rome, 2008.
- Doran A.A., "Where Should Haitians Go? Why 'Environmental Refugees' are up the creek without a paddle", *Villanova Environmental Law Journal*, vol. 22, 2011.

- Douma W., "Introduction of first draft Symposium Recommendations. Symposium on Climate Change, Water Stress, Conflict and Migration", 21 September 2011, The Hague.
- Doyle T., Chaturvedi S., "Climate Refugees and Security, Conceptualizations, Categories and Contestations" [in] Dryzek J.S., Norgaard R.B., Schlosberg D. (eds.), *The Oxford Handbook of Climate Change and Society*, Oxford University Press, Oxford, 2011, pp. 273-290.
- Drabo A., Mously Mbaye L., *Climate Change, Natural Disasters and Migration: An Empirical Analysis in Developing Countries*, Discussion Paper No. 5927, IZA, Bonn, August 2011.
- Dun O., Gemenne F., Stojanov R., "Environmentally Displaced Persons: Working Definitions for the Each-for Project", The Environmental Change and Forced Migration Scenarios (EACH-FOR) Project is a research project funded under the Sixth Framework Programme (FP6) (Priority [8.1] - Policy-oriented research) of the European Commission.
- Duval L., Wolff F-Ch., *L'effet des transferts migratoires sur la déforestation dans les pays en développement*, (Working Paper), Laboratoire d'Economie et de Management Nantes-Atlantique Université de Nantes, 2007.
- El-Hinnawi E., *Environmental Refugees*, United Nations Environmental Programme, Nairobi, 1985.
- Elliott L., *Climate Change, Migration and Human Security in Southeast Asia*, Policy Brief No. 13, RSIS Centre, Singapore, 2011.
- Emerson S., "Floods in Pakistan" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, pp. 17-27.
- "Environmentally induced migration and displacement: A 21<sup>st</sup> century challenge", (Report Committee on Migration, Refugees and Population), Council of Europe, Parliamentary Assembly, Council of Europe, 23<sup>th</sup> December 2008.
- Experts Seminar: Migration and The Environment*, International Dialogue on Migration, no. 10, IOM, Geneva, 2008.
- Feeling the Heat: why governments must act to tackle the impact of climate change on global water supplies and avert mass movement of climate change refugees*, Tearfund, London, 2006.
- Fernandes J.L.J., "Insegurança ambiental e migrações. Contributo para uma sistematização de conceitos", see: eumed.net, Universidad de Málaga, 2008.
- Fernando N., Punchihewa A.G., *Lessons learnt from the 2004 Indian Ocean tsunami*, Government Office for Science, London, 2011, available at: <http://www.bis.gov.uk>
- Ferris E., *Making sense of climate change, natural disasters and displacement*, Calcutta Research Group - Winter Course Lecture, Brookings Institution, Washington, 2007.
- Fischer C., Vollmer R., *Migration and Displacement in Sub-Saharan Africa The Security-Migration Nexus II*, Brief 39, Bonn International Center for Conversion, 2009.

- Flintan F., "Environmental Refugees - A Misnomer or A Reality?", (Conference Paper), A contribution to the Wilton Park Conference Report on Environmental Security and Conflict Prevention, March 1<sup>st</sup>-3<sup>rd</sup>, 2001.
- Fornos W., *Desperate Departures: The Flight of Environmental Refugees*, The Population Institute, Washington D.C., 1992.
- Gallina A., *Migration & Development Linkage in Sri Lanka: A Post-Tsunami and Civil Conflict Approach*, Federico Caffè Centre Research Reports, no. 2/2007, Roskilde University, 2007.
- Ganguly G., *Climate change, disappearing states and forced human displacement: The desirability and merits of a protocol or convention for persons displaced by climate change*, Paper presented 28 May 2011 at the ANU College of Law, Environmental Law Student Society Symposium, 2011.
- Gemenne F., *Climate Change and Forced Displacements: Towards a Global Environmental Responsibility? The Case of the Small Island Developing States (SIDS) in the South Pacific Ocean*, Les Cahiers du CEDEM, Université de Liège.
- Gemenne F., "Climate Change and Forced Displacements: Towards a Global Environmental Responsibility?", Paper presented at the annual meeting of the International Studies Association, Town & Country Resort and Convention Center, San Diego, March 22, 2006.
- Gemenne F., "Franchir une frontière: au fond, quelle importance? Le cas des migrations environnementales", Migrations internationales et intégration : vers de nouveaux paradigmes interprétatifs?, Séminaire de lancement du programme 'Migrations et Diversité culturelle' de l'Ecole doctorale thématique en Sciences sociales Université Libre de Bruxelles, 14-15 juin 2007.
- Gemenne F., "Climate-induced migration and the securitization of borders in the Mediterranean Conflicting policy directions", First Workshop on Climate-Induced Migration and Displacement in MENA Marseille, 15-16 June 2010.
- Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris.
- Goldin I., "Migration and Global Environmental Change", The future of global migration and the impact of environmental change, October 2011.
- Gonçalves J., "Tackling Environmental Migration in the Mediterranean Region", (Conference Paper), Porto, Portugal August 17-20, 2011.
- Graves P.E., *Migration and climate*, MPRA Paper, no. 19916, University of Munich, 1980.
- Gray C., Mueller V., "Drought and Human Migration in Rural Ethiopia", (Submission for PAA 2011), Princeton University, 2011.

- Groen J.A., Polivka A.E., *Going Home after Hurricane Katrina: Determinants of Return Migration and Changes in Affected Areas*, Working Paper, no. 428, U.S. Bureau of Labor Statistics, September 2009.
- Grote U., Engell S., Schraven B., *Migration due to the tsunami in Sri Lanka: Analyzing vulnerability and migration at the household level*, ZEF discussion papers on development policy 106, Zentrum für Entwicklungsforschung (ZEF), 2006.
- Guterres A., *Climate change, natural disasters and human displacement: a UNHCR perspective*, UNHCR, Geneva, 2009.
- Gütermann N., Schneider E., "The Earthquake in Haiti" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, 2011, pp. 39-49.
- Hall N., "Climate change and institutional change in UNHCR", Conference Paper for UNU-EHS Summer Academy on Protecting Environmental Migration: Creating New Policy and Institutional Frameworks, Bonn, 2010.
- Hammer Y., *Confronting ecological futures: global environmental crises in contemporary survival quests for young adults*, <http://urn.kb.se/resolve?urn=urn:nbn:se:sbi-2>
- Hampson F., *Expanded working paper on the human rights situation of indigenous peoples in States and other territories threatened with extinction for environmental reasons*, United Nations, Geneva, 16 July 2005.
- Handmer J., Reale A., *Migration and Global Environmental Change*, RMIT University Melbourne, October 2011.
- Haug R., *Livelihood security among pastoralists in Northern Sudan : post-hunger development in a country at war: Forced migration, environmental change and long term development*, Noragric Working Paper no. 19, Noragric, 2000.
- Hens L., "Environmentally Displaced People" [in] *Encyclopedia of Life Support Systems (EOLSS)*.
- Hermans L.M., "Climate Change, Water Stress, Conflict and Migration: Taking stock of current insights through a vulnerability lens", Portal UNESCO Netherlands.
- Hermesmeyer H.A., "Environmental refugees: A denial of rights. Contemporary Topics in Forced Migration", (Working Papers 2, pp. 2-19), Forced Migration Laboratory, Center for Comparative Immigration Studies, University of California, San Diego, 2002.
- Hooper A., "Tokelau" [in] *Climatic Change Impacts on New Zealand*, Ministry for the Environment, Wellington , 1990, pp. 210-214.
- Hugo G., "Migration, Development and Environment", (Working Paper), Draft paper for Research

- Workshop on Migration and the Environment: Developing a Global Research Agenda, 16-18 April 2008, Munich.
- Jacobsen K., *The Impact of Refugees on the Environment: A Review of the Evidence*, Refugee Policy Group. Center for Policy Analysis and Research on Refugee Issues, Washington, 1994.
- Jacobson J.L., *Environmental Refugees: A Yardstick of Habitability*. Worldwatch Paper no. 86, Worldwatch Institute, Washington, 1988.
- Jäger J, Fruhmann J., Grunberger S., Vag A., *EACH-FOR Synthesis Report*, EACH-FOR, Budapest, 2009.
- Jodoin S., *Lost in Translation. Human Rights in The Climate Change Negotiations*, CISDL Legal Working Papers on Climate Change Law and Policy, Copenhagen, December 2009.
- Jónsson G., *The environmental factor in migration dynamics – a review of African case studies*, International Migration Institute, Working Paper no. 21, 2010.
- Joseph A.O., *Forced Migration and Climate Change: How it Challenges the 1951 Refugee Convention*, [www.refugeeaware.org.uk](http://www.refugeeaware.org.uk).
- Kälin W., "Displacement caused by the effects of climate change: who will be affected and what are the gaps in the normative framework for their protection?", Brookings Institution, Santa Barbara, 2008.
- Kälin W., *Climate Change Induced Displacement – A Challenge for International Law*, Distinguished Lecture Series 3, Mahanirban Calcutta Research Group, Kolkata, India, 2011.
- Kartha S., *Climate Change: Redemption through Crisis*, GTI Paper Series, Tellus Institute, Boston, 2006.
- Kassenberg A., Karaczun Z.M. (red.), *Zmiany klimatu są faktem. Zbiór materiałów przygotowanych w ramach projektu: Zmiany klimatu w świadomości obywateli*, Centrum Stosunków Międzynarodowych, Warszawa, 2009.
- Kavanova K., "Qualitative Research Methods in Environmental Migration Research in the Example of Belarusian Environmental Migrants", <http://www.ehs.unu.edu/file/get/3811>
- Keane D., "Environmental Causes and Consequences of Migration: A Search for the Meaning of 'Environmental Refugees'", [http://findarticles.com/p/articles/mi\\_qa3970/is\\_200401/ai\\_n9353848/](http://findarticles.com/p/articles/mi_qa3970/is_200401/ai_n9353848/)
- Kelman I., "Island Security and Disaster Diplomacy in the Context of Climate Change. Center for Capacity Building", *Les Cahiers de la Sécurité*, Academic Centre for Atmospheric Research, vol. 63, 2006, pp. 61-94.
- Kempf W., *A Sea of Environmental Refugees? Oceania in an Age of Climate Change*, (Research Paper), see: [www.uni-goettingen.de/](http://www.uni-goettingen.de/)

- Kerr S., Cardenas S., Hendy J., *Migration and the Environment in the Galapagos: An analysis of economic and policy incentives driving migration, potential impacts from migration control, and potential policies to reduce migration pressure*, Motu Economic and Public Policy Research in its series, Working Paper no. 03/17, February 2004.
- Kinuthia Njenga C., Blanco P.K., "Climate Change and Migration in Nairobi. Environmental Migration and its Urban Manifestation at the Local Scale", World Bank, May 2009.
- Kneer B., "Interactions between desertification and population movements", (Working Paper), International Union for the Scientific Study of Population, 2001.
- Kniveton D., Schmidt-Verkerk K., Smith Ch., Black R., *Climate Change and Migration. Improving Methodologies to Estimate Flows*, (Report no. 33), International Organization for Migration, Geneva, 2008.
- Koubi V., Schaffer L., Spilker G., Bernauer T., (Research Paper), <http://www.princeton.edu/~pcglobal/conferences/environment/papers/bkss.pdf>
- Kritz M.M., *Climate Change and Migration Adaptations*, Working Paper Series 2.16., Cornell University, 1990.
- Kromm Ch., Sturgis S., "Hurricane Katrina and the Guiding Principles on Internal Displacement. A Global Human Perspective on a Natural Disaster", Brookings-Bern Project on Internally Displaced Persons at the Brookings Institution, January 2008.
- Kull D.E., *The relationship between forced migrants and their environment*, University of Oxford. Refugee Studies Centre, Oxford, 2005.
- Kolmannskog V., *Climate change, disaster, displacement and migration: initial evidence from Africa*, New Issues in Refugee Research (UNHCR Working Paper Series), vol. 180, Geneva, December 2009.
- La Gouanvic L., "Is Cambodia the future shelter for Vietnamese climate exiles?", Ka-set - Information website about Cambodia, 22 June 2009.
- Laczko F. Aghazarm C. (eds.), *Migration, Environment and Climate Change: Assessing the evidence*, International Organization for Migration, 2009.
- Lambert J., *Refugees and the Environment, The forgotten element of sustainability*, The Greens/European Free Alliance in the European Parliament, Brussels, 2002.
- Landry C.E., Bin O., Hindsley P., Whitehead J.C., Wilson K., *Going Home: Evacuation-Migration Decisions of Hurricane Katrina Survivors*, Working Paper, Center for Natural Hazards Research, Greenville, North Carolina, 2007.
- Le Goff J., "The Xynthia Storm in France" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, 2011, pp. 57-

- Leighton Schwartz M., Hanson H., "U.S.-Mexico Case Study on Desertification and Migration", The Natural Heritage Institute, Wilson Center, 2008.
- Leighton M., Shen X., Warner K., *Climate Change and Migration: Rethinking Policies for Adaptation and Disaster Risk Reduction*, SOURCE (Studies of the University Research, Consuel, Education-Publication Series), no. 15, 2011, UNU-EHS, Bonn, 2011.
- Leighton M., Shen X., Warner K., Zissener M. (eds.), *Policy and Institutional Mechanisms to Address the Needs of Climate-Related Migrants*, (Results of the 2010 Summer Academy of Social Vulnerability), UNU-EHS, Bonn, July 2011.
- Loneragan S., Swain A., *Environmental Degradation and Population Displacement*, Global Environmental Change and Human Security Project, Research Report no. 2, Victoria, BC, Canada, May 1999.
- López Ramírez A., Vega H., *Migrantes ambientales: slogan político o herramienta analítica? El caso de Matagalpa, Nicaragua*, Escuela de Relaciones Internacionales de la Universidad Nacional, Costa Rica, 2002.
- Massey D.S., Axinn W., (et al.), *Environmental Change and Out-Migration: Evidence from Nepal*. Research Reports. University of Michigan, Population Studies Center, Ann Arbor, 2007.
- McAdam J., Saul B., *An insecure climate for human security? Climate-induced displacement and international law*, Working Paper 4, Sydney Center for International Law, University of Sydney, Sydney, 2008.
- McGranham R., Tacoli C., *Rural urban migration in China: policy options for economic growth, environmental sustainability and equity*, (Human Settlement Working Paper), IIED, London, 2006.
- McGranham G., Satterthwaite D., Tacoli C., *Rural-urban change, boundary problems and environmental burdens*, (Human Settlement Working Paper), IIED, London, 2004.
- McLeman R., *Climate change, migration and critical international security considerations*, (Working Paper), International Organization For Migration Research Series, 2011.
- Maas A., Carius A., *Migration and Global Environmental Change*, (UK Government's Foresight Project, Migration and Global Environmental Change), London, October, 2011.
- Mackie K., Stojadinovic B., "Residual Displacement and Post Earthquake Capacity of Highway Bridges ", Paper presented at 13th World Conference on Earthquake Engineering, Vancouver, B.C., Canada, August 1-6, 2004, Paper No. 1550.
- Mallick D.L., "Growing Environmental and Climate Refugees in Bangladesh: Urgent Actions are required",



- Manuvie C., "Climate Change Victimization: Relooking the Refugee Convention", UNU-EHS, available at: <http://www.ehs.unu.edu/file/get/5409>
- Marandola E., Modesto dos Santos F., "Percepção dos perigos ambientais urbanos: efeitos de lugar ou falácia ecológica?", Trabalho apresentado no XVII Encontro Nacional de Estudos Populacionais, ABEP, realizado em Caxambu - MG – Brasil, de 20 a 24 de Setembro de 2010.
- Marchiori L., Maystadt J-F., Schumacher I., *Another Inconvenient Truth: Climate change and migration in sub-Saharan Africa*, (Research Paper available at [http://www.core.ucl.ac.be/~maystadt/page1/page7/files/page7\\_1.pdf](http://www.core.ucl.ac.be/~maystadt/page1/page7/files/page7_1.pdf)).
- Marshall N., "Re-examining the Rights of Refugees in an Environmental Context" *Paper presented at the annual meeting of the MPSA Annual National Conference*, Palmer House Hotel, Hilton, Chicago, IL, April 03, 2008.
- Marris E., "Moving on assisted migration", *Nature Reports Climate Change*, <http://www.nature.com/climate/2008/0809/full/climate.2008.86.html>
- Martin S.F., *Climate Change, Migration and Adaptation, Study-Team on Climate-Induced Migration*, The German Marshall Fund of the United States, 2009.
- Massey D.S., Axinn W.G., Ghimire D.J., "Environmental change and out-migration: evidence from Nepal", Population Studies Center Research Report 07-615, Institute for Social Research, University of Michigan, Ann Arbor, 2007.
- Migrations et déplacements environnementaux: un défi pour le XXIe siècle*, Rapport Commission des migrations, des réfugiés et de la population, Parliamentary Assembly, Council of Europe, December 2008.
- Mohammed E.A., *Tsunami Displacement: Lessons For Climate Change Adaptation Programming. Findings on Rural Economic and Livelihood Recovery*, United States Agency for International Development (UNSAID), Washington, December 2010.
- Mokhnacheva D., "Wildfires in Russia" [in] Gemenne F., Brucker P., Glasser J. (eds), *The State of Environmental Migration 2010*, IDDRI & SciencesPo Study No. 07/2011, Paris, pp. 27-39.
- Monitoring disaster displacement in the context of climate change. Findings of a study by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre*, OCHA, IDMC, NRC, Oslo-Geneva, June 2010.
- Morel M., *Protecting environmental migrants. Recent findings from the UNU-EHS Summer Academy*, Proceedings from the 2010 Berlin Conference on Human Dimensions of Global ENvironmental Change, Berlin 8-9 October, 2010.
- Morrissey J., *Environmental Change and Forced Migration A State of the Art Review*, (Background



- Paper), Refugee Studies Centre Oxford Department of International Development, January 2009.
- Mougeout L., *Outmigration Induced by Environmental Degradation*. Environment Department, World Bank, Washington D.C., 1992.
- Mukhopadhyay A.G., *Critical Climatics, Migration & Biopolitics: The Mexico-US Border and Beyond*, SSRN Working papers, October 2009.
- Muradian R., O'Connor M., Martinez-Alier J., "Embodied pollution in trade: estimating the 'environmental load displacement' of industrial countries", *Ecological Economics*, vol. 41, 2002, pp. 51-67.
- Myers N., "Environmentally-induced displacements: the state of the art" [in] *Environmentally-Induced Population Displacements and Environmental Impacts Resulting from Mass Migration*, International Symposium, 21-24 April 1996, Geneva: International Organisation for Migration with United Nations High Commissioner for Refugees and Refugee Policy Group, 1996, pp. 72-73.
- Naik A., Stigter E., Laczko F., *Migration. Development and Natural Disasters: Insight from the Indian Ocean Tsunami*, Migration Research Series, International Organization for Migration, Geneva, 2007.
- Nakao M., Konagaya Y., Chimedyn S., *Ecological migration. Environmental policy in China*, Peter Lang, New York, 2010.
- Naude W., *Conflict, Disasters, and No Jobs: Reasons for International Migration from Sub-Saharan Africa*, World Institute for Development Economic Research, Working Papers, no. RP2008/85, 2008.
- Newland K., *Climate Change and Migration Dynamics*, European University Institute & MPI, September 2011.
- Sachs A., *Eco-Justice: Linking Human Rights and the Environment*, Worldwatch Paper 127, Washington D.C, Worldwatch Institute, 1995.
- Sachs W., *Environment and Human Rights*, Wuppertal Paper No.137, September, Wuppertal Institute for Climate, Environment, Energy, Wuppertal, 2003.
- Salehyan I., "Refugees, Climate Change, and Instability", (Conference Paper), Human Security and Climate Change An International Workshop Holmen Fjord Hotel, Asker, near Oslo, 21-23 June 2005.
- Sauvagnargues F., "Les constats sur l'évolution des causes d'exil" [in] *Europe et droit d'asile. Actes des troisièmes Assises sur le Droit d'Asile, Textes réunis par le CETIM et l'Association pour les Troisièmes Assises*, Centre Europe-Tiers Monde (CETIM), Genève, 1992, pp. 42-45.
- Scott J., "Protection of Environmentally Displaced Populations through Strengthening Existing

- Environmental Human Rights Law", [http://works.bepress.com/jessica\\_scott/1/](http://works.bepress.com/jessica_scott/1/)
- Shelton D., *Human Rights and the Environment: Jurisprudence of Human Rights Bodies*, Background Paper No. 2, Joint UNEP-OHCHR Expert Seminar on Human Rights and the Environment, 14-16.01.2002.
- Stal M., Warner K., *The Way Forward. Researching the Environment and Migration Nexus*, (Research Brief Based on the Outcomes of the 2<sup>nd</sup> Expert Workshop on Climate Change, Environment and Migration, Munich 23-24 July 2009, EHS-UNU, Bonn, 2010.
- Statement of the Global Migration Group on the Impact of Climate Change on Migration*, Paris on 15 November 2011.
- Stojanov R., *Environmental Migration: How Can Be Estimated and Predicted*, <http://www.vos.cz/>
- Story Johnson L., "Environment, Security and Environmental Refugees", [http://www.jael-online.org/wp-content/uploads/2010/07/V1N2\\_Johnson.pdf](http://www.jael-online.org/wp-content/uploads/2010/07/V1N2_Johnson.pdf)
- Sultana R., "Migration, Gender and Human Security in an Era of Global Structural Change and Crisis", Paper Submitted on 1-2 July, 2010 International Institute of Social Studies (ISS), Erasmus University Rotterdam
- Susmita D., Laplante B., Meisner C., Wheeler D., Yan J., *The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis*, World Bank Policy Research Working Paper no. 4136, World Bank, Washington, 2007.
- Tan Y., "Chinese Perspectives on Climate Change and Resettlement", Background paper to the Population-Environment Research Network (PERN) Cyberseminar, "Preparing for Population Displacement and Resettlement Associated with Climate Change and Large Climate Mitigation and Adaptation Projects" (November 2011).
- Obioha E.E., "Climate Change, Population Drift and Violent Conflict Over Land Resources in North Eastern Nigeria", (Conference Paper: Human Security and Climate Change, An International Workshop Holmen Fjord Hotel, Asker, near Oslo, 21- 23 June 2005).
- Oels A., "Asylum rights for climate refugees? From Agamben's bare life to the autonomy of migration", Paper prepared for presentation at the Annual Convention of the International Studies Association in San Francisco, 26th March 2008.
- Ojima R., Tartalha do Nascimento T., "Meio Ambiente, Migração e Refugiados Ambientais: Novos Debates, Antigos Desafios", IV Encontro Nacional da Anppas, 4,5,6junho de 2008, Brasília.
- Oliver-Smith A. (ed.), *Nature, Society, and Population Displacement. Toward an Understanding of Environmental Migration and Social Vulnerability*, (InterSecTions-Interdisciplinary Security Connections), United Nations University-Institute for Environment and Human Security, no. 8, 2009.

- Oliver-Smith A. (ed.), *Vulnerability of Coastal Peoples. Responding to the Local Challenges of Global Climate Change in the 21<sup>st</sup> Century*, (InterSecTions-Interdisciplinary Security Connections), United Nations University-Institute for Environment and Human Security, 2009.
- Oliver-Smith A., Shen X., *Linking Environmental Change, Migration & Social Vulnerability*, SOURCE (Studies of the University Research, Consuel, Education- Publication Series), no. 12, 2009, UNU-EHS, Bonn, 2011.
- Oucho J.O., "Environmental displacement of refugees and internally displaced persons in Sub-Saharan Africa", Keynote Address to the African Migration Alliance Biennial Workshop on Climate Change, Environment and Migration, East London, South Africa, 15-16 November 2007.
- Penning-Rowsell E., Sultana P., Thompson P., *Population movement in response to climaterelated hazards in Bangladesh: the 'last resort'*, Government Office for Science, London, 2011, available at: <http://www.bis.gov.uk/>
- Pentinat S.B., "Aproximación al concepto de refugiado ambiental: origen y regulación jurídica internacional", Universidad de Cadiz, ???
- Piguet E., *New issues in refugee research: Climate change and forced migration*, Working Paper no. 153, UNHCR, Geneva, 2008.
- Piguet E., Pecoud A., de Guchteneire P., *Migrations et Changements Climatiques*, Working Paper no. 10/2010, Université de Neuchâtel.
- Piguet E., *Re-embedding the environment into migration theory. In: Conference: Remaking Migration into Migration Theory: Intersections and CrossFertilisations*, University of Brighton and University of Sussex, 2009.
- Piguet E., "The Migration/Climate Change Nexus: An Assessment", (Conference Paper), Rethinking Migration: Climate, Resource Conflicts and Migration in Europe, 13 -14 Oct. 2011.
- Policy Options to Support Climate-Induced Migration. (Financed by the Climate Change Fund)*, Research and Development Technical Assistance (RDTA), Asian Development Bank, December 2009.
- Quel statut pour les réfugiés environnementaux?*, (Actes de la journée d'étude du 14 décembre 2007), Groupe d'information et de soutien des immigrés (GISTI), Paris, 2008.
- Raillon C., *Bangladesh, catastrophes climatiques Les pratiques humanitaires au défi de la 'résilience'*, (Working Paper), Urgence Rehabilitation Developpment, 2009, [http://www.urd.org/IMG/pdf/Rapport\\_Final\\_Bangladesh\\_francais.pdf](http://www.urd.org/IMG/pdf/Rapport_Final_Bangladesh_francais.pdf)
- Rayfuse R., "International Law and Disappearing States: Utilising Maritime Entitlements to Overcome the Statehood Dilemma", Working Paper, no. 52, University of New South Wales Faculty of Law, 2010.

- Releigh C., Jordan L., Salehyan I., *Assessing the Impact of Climate Change on Migration and Conflict*, World Bank, Washington, 2008.
- Renaud F., Bogardi J.J., Dun O., Warner K., *Control, Adapt or Flee. How to Face Environmental Migration?*, (InterSecTions), UNU Institute for Environment and Human Security (UNU-EHS), Bonn, 2007.
- Renner M., "Environment a Growing Driver in Displacement of People", Vital Signs Online, <http://www.worldwatch.org/node/5888>
- Reuveny R., "Environmental Change, Migration and Conflict: Theoretical Analysis and Empirical Explorations", (Conference Paper), Human Security and Climate Change An International Workshop, Oslo, 21-23 June 2005.
- Rizwana Y., "Integrated Strategies To Minimize The Socio-Economic Impacts On Climate Change Refugees", Paper Presented At World University Congress, Turkey, October, 2010.
- Rodrigues Braz Silva C., "A questão dos refugiados ambientais: Um novo desafio para o direito internacional", <http://gedi.objectis.net/eventos-1/ilsabrazil2008/artigos/dheh/brazsilva.pdf>
- Rural Poverty, Migration, and the Environment in Developing Countries*, World Bank Publications, Washington DC, 1992.
- Sadako O., "Statement by the United Nations High Commissioner for Refugees at the Conference on Environment and Development" Speeches of the High Commissioner, Rio de Janeiro, 1992.
- Salehyan I., "Refugees, Climate Change, and Instability [in] Human Security and Climate Change—International Workshop. Oslo (Norway), 21-23 June, 2005.
- Selby J., Hoffmann C., *Water, conflict and migration in the Eastern Mediterranean*, Government Office for Science, London, 2011, available at: <http://www.bis.gov.uk>
- Sexton S., Hildyard N., Lohmann L., *We're a Small Island: The Greening of Intolerance*, The Corner House, 2005.
- Shalaby T., *The Impact of Climate Change on Migration: The Case of Egypt*, First Workshop on Climate-Induced Migration and Displacement in MENA, Marseille, 15-16 June 2010.
- Shamsuddoha M.D., Chowdhury R.K., "Climate Change Induced Forced Migrants: in need of dignified recognition under a new Protocol", Equity and Justice Working Group Bangladesh (EquityBD), December 2009.
- Shapiro J., "China, National Identity and Displacement of Environmental Harm", Paper presented at the annual meeting of the International Studies Association Annual Conference "Global Governance: Political Authority in Transition", Le Centre Sheraton Montreal Hotel, 2011-03-16.
- Sharma J.R., *The impact of environmental change on labour migration from Nepal to the Gulf States*, Government Office for Science, London, 2011, available at: <http://www.bis.gov.uk>

- Siyaranamual M.D., *Constructing the Model of Environmental Migration*, Center for Economics and Development Studies (CEDS), Padjadjaran University, March, 2009.
- Smil V., "China's Environmental Refugees: Causes, Dimensions and Risks of an Emerging Problem" [in] Spillman K.R., Bachler G. (eds.), *Environment and Conflicts Project (ENCOP). International Project on Violence and Conflicts caused by Environmental Degradation and Peaceful Conflict Resolution*, Center for Security Studies and Conflict Research Swiss Federal Institute on Technology, 1995, pp. 74-91.
- Söderbergh C., *Human Rights in a Warmer World: The Case of Climate Change Displacement*, LUP Working Paper No. 2011-01-28.
- Somerville W., "Migration and Global Environmental Change", Environmental migration governance: debate in the European Union, October 2011.
- Söderbergh C., *Human Rights in a Warmer World: The Case of Climate Change Displacement*, LUP Working Paper, no. 2011-01-28.
- Šrámková K., What International Protection of Involuntary Environmental Migrants?, <http://www.rozvojovka.cz>
- Srichandan S.P., *Climate Change, Migration, and EU Security*, (Working Paper presented at the European Security Defence Forum), Chatham House, 2009.
- Star C., "Climate Justice Campaigns and Environmental Refugees", (Research Paper, Griffith University).
- Stranks R., *Environmental Refugees?*, Department of Foreign Affairs, Ottawa, 1997, <http://www.dfait-maeci.gc.ca/english/foreignp/dfait.comentary/1997/refugees.htm>
- Suhrke A., Hazarika S., *Pressure Points: Environmental Degradation, Migration and Conflict*, Occasional Paper of Project on Environmental Change and Acute Conflict, American Academy of Arts and Sciences, Washington, 1993.
- Swain A., *The environmental trap: the Ganges River diversion, Bangladeshi migration, and conflicts in India*, (Department of Peace and Conflict Research Series, no. 41), Uppsala University, Uppsala, 1996.
- Terminski B., *Les migrations, les réfugiés, les droits de l'homme : un guide bibliographique des publications parues en language française*, UNHCR New Issues in Refugee Research (Working Paper Series), vol. 216, Geneva, 2011.
- Thrupp L.A., Megateli N., Critical Links. Food Security and the Environment in the Greater Horn of Africa, Discussion Paper, World Resources Institute, 1999.
- Trollaldalen J.M., Birkeland N., Borgen J., Scott P.T., *Environmental Refugees: A discussion Paper*, World Foundation for Environment and Development and Norwegian Refugee Council, Oslo,

1992.

- Trollalden J.M., Birkeland N., Borgen J., Scott P.T., "Case Studies: Secondary Effects, of Degradation: Environmental Refugees" [in] *International Environmental Conflict Resolution. The Role of the United Nations*, World Foundation for Environment and Development, 1992.
- Turner M.H., Longstreth J.D., Johnson A.K., Rosenberg N.J. (ed.), *Dust Bowl migration as an analog for possible global warming-induced migration from Mexico*, Conference: 19. annual conference and exposition of the National Association of Environmental Professionals (NAEP), Global strategies for environmental issues, New Orleans, LA (United States), 12-15 June 1994.
- Turton D., "Refugees and 'Other Forced Migrants': Towards a Unitary Study of Forced Migration", Paper presented at the Workshop on Settlement and Resettlement in Ethiopia, January 28-30 2003, Addis Ababa.
- Unjust waters: climate change, flooding and the protection of poor urban communities: experiences from six African cities*, Action Aid International, 2007.
- Upadhyay D.K., "Climate Change Induced Migration in South Asia: A Case Study of Bangladeshi Migration to India", (Conference Paper), International Conference on Migration, Gender and Human Security in an Era of Global Structural Change and Crisis, The Hague, 2006.
- Van der Geest K., *North-South migration in Ghana: What role for the environment?*, Paper Presented at the International Conference on Environment, Forced Migration and Social Vulnerability, 9-11 October 2008, Bonn.
- Vieira I., "Environmental migrants from Africa to Europe State of the Art and research clues", (Conference Paper), Congresso Ibérico de Estudos Africanos, Lisboa, 2010.
- Walsham M., *Assessing the evidence: environment, climate change and migration in Bangladesh*, Dhaka, Bangladesh : International Organization for Migration, 2010.
- Warner K., "Climate Change Induced Displacement: Adaptation Policy in the Context of the UNFCCC Climate Negotiations", UNHCR Division of International Protection, May 2011.
- Warner K., "Migration: Climate adaptation or failure to adapt? Findings from a global comparative field study", *P Conf. Ser.: Earth Environ. Sci.*, Issue 56, 2009.
- Warner K., Ehrkart Ch., de Sherbinin A., Adamo S., Chai-Onn T., "In Search of Shelter Mapping the Effects of Climate Change on Human Migration and Displacement", (Working Paper), Columbia University, 2009, <http://www.ciesin.columbia.edu/documents/ClimMigr-rpt-june09.pdf>.
- World Disasters Report. Focus on Recovery*, International Federation of Red Cross and Red Crescent Societies, Geneva, 2001.
- Yan T., Guo F., "Environmental Concerns and Population Displacement in West China", (Conference Paper), presented at the 8<sup>th</sup> APMRN Conference, 26-29 May, 2007, Fuzhou, China.

Yenotani, M., *Displacement due to Natural Hazard-Induced Disasters. Global Estimates for 2009 and 2010*, IDMC & NRC, Oslo, 2011.

Yusuf R., "Integrated Strategies To Minimize The Socio-Economic Impacts On Climate Change Refugees", (Conference Paper), Canakkale University, 20-24 October 2010.

Zetter R., *Protecting environmentally displaced people. Developing the capacity of legal and normative frameworks*, (Research Report), Refugee Studies Centre University of Oxford, February 2011.

## 4.5 LIST OF ACRONYMS

AU- African Union

CIDPs - Conflict Induced Internally Displaced People

CIDR – Conflict Induced Displacement and Resettlement

DIDR – Development Induced Displacement and Resettlement

DIDPs – Development Induced Displaced People

DPs – Displaced Persons

ECOWAS- Economic Community of West African States

DP -Environmentally Displaced Persons, Ecologically Displaced Persons (People)

EIPM - Environmentally Induced Population Movements

ERTB – environmental refugee to be

ICRC – International Committee of the Red Cross

IDMC – Internal Displacement Monitoring Centre

IDPs – Internally Displaced Persons

IOM – International Organization for Migration

IPCC – Intergovernmental Panel on Climate Change

NGO – Non-governmental organisation

NRC – Norwegian Refugee Council

OCHA - Office for the Coordination of Humanitarian Affairs

OHCHR- Office of the High Commissioner for Human Rights

PAP – Project Affected Person

SOPEMI- Système D'Observation Permanente des Migration

UDHR – Universal Declaration of Human Rights

UE – European Union

UNCCD - Secretariat of the United Nations Convention to Combat Desertification

UNCED - United Nations Conference on Environment and Development

UNDP – United Nations Development Programme

UNEP - United Nations Environmental Programme

UNICEF - United Nations Children's Fund

UN – United Nations

UNFCCC - UN Framework Convention on Climate Change

UNFPA - United Nations Population Fund

UNHCR – United Nations High Commissioner for Refugees

UN-Habitat – United Nations Human Settlements Programme

UNU – United Nations University

UNU-NHS – United Nations University Institute for Environment and Human Security